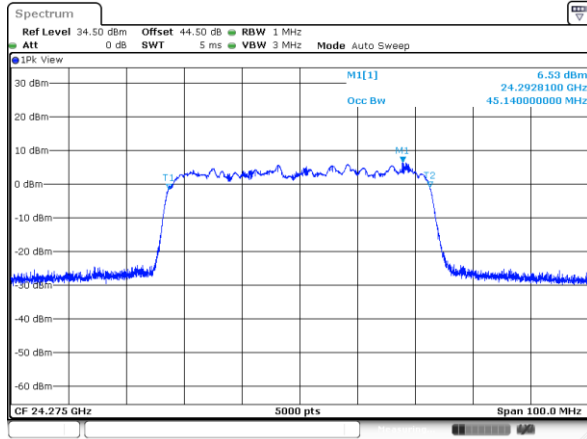




CP-OFDM Module 1

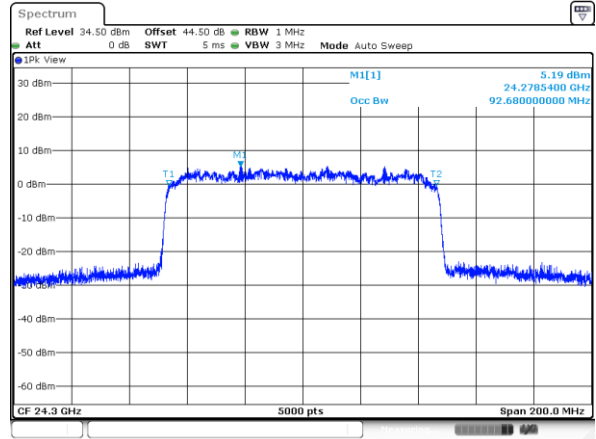
NR Band n258a

Lowest Channel / 50MHz / 64QAM



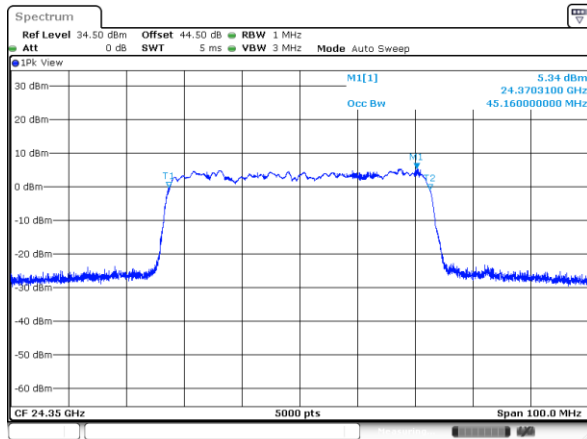
Date: 26.JUL.2020 09:07:26

Lowest Channel / 100MHz / QPSK



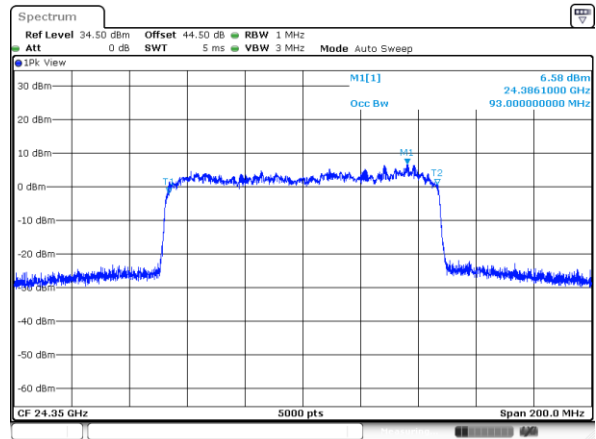
Date: 26.JUL.2020 09:52:19

Middle Channel / 50MHz / 64QAM



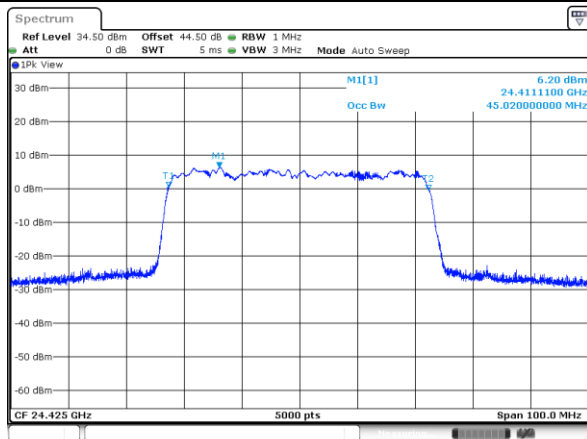
Date: 26.JUL.2020 10:07:52

Middle Channel / 100MHz / QPSK



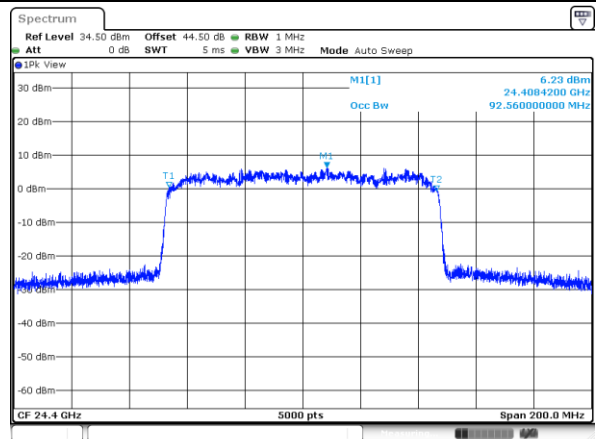
Date: 26.JUL.2020 10:24:18

Highest Channel / 50MHz / 64QAM



Date: 26.JUL.2020 10:39:13

Highest Channel / 100MHz / QPSK



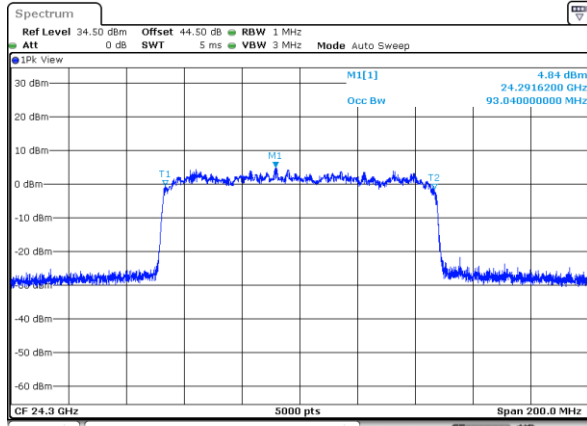
Date: 26.JUL.2020 10:49:42



CP-OFDM Module 1

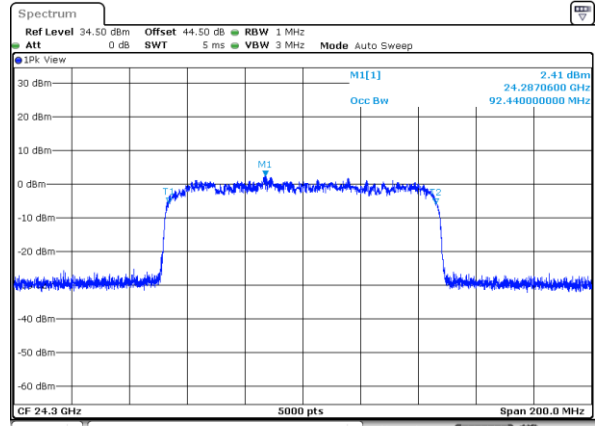
NR Band n258a

Lowest Channel / 100MHz / 16QAM



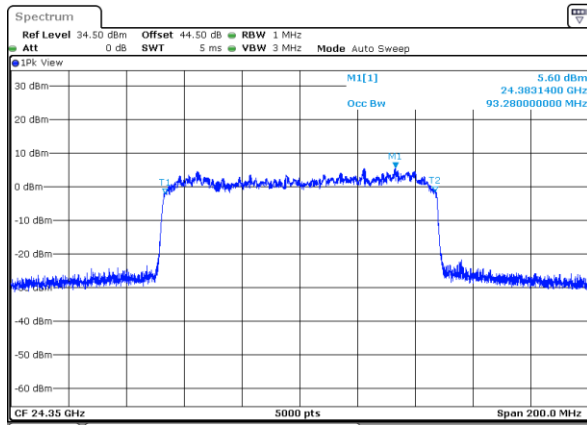
Date: 26.JUL.2020 09:53:30

Lowest Channel / 100MHz / 64QAM



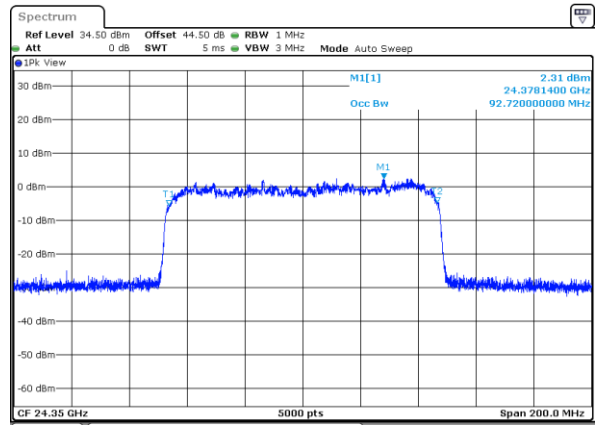
Date: 26.JUL.2020 09:54:24

Middle Channel / 100MHz / 16QAM



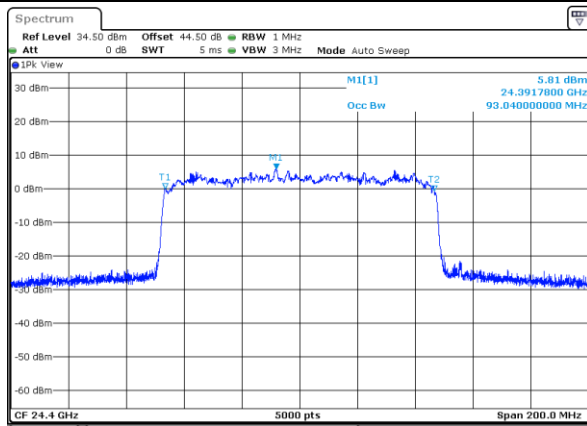
Date: 26.JUL.2020 10:25:05

Middle Channel / 100MHz / 64QAM



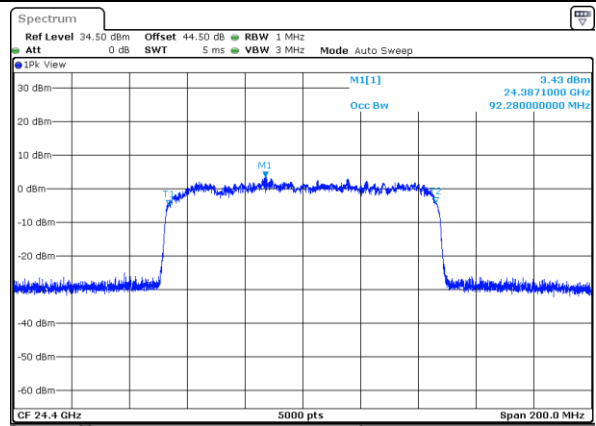
Date: 26.JUL.2020 10:25:56

Highest Channel / 100MHz / 16QAM



Date: 26.JUL.2020 10:50:51

Highest Channel / 100MHz / 64QAM



Date: 26.JUL.2020 10:52:17

Radiated Out of Band Emissions

Mode			CP-OFDM Module 1 NR Band n258a: BE (dBm) 1 RB					
BW			50MHz			100MHz		
Limit (dBm)			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Low CH	0~10%OB	≤ -5	-22.58	-22.68	-25.53	-24.11	-25.83	-26.57
	>10%OB	≤ -13	-34.62	-34.53	-34.87	-34.64	-34.82	-34.78
High CH	0~10%OB	≤ -5	-22.97	-25.18	-25.52	-22.96	-26.91	-27.13
	>10%OB	≤ -13	-34.63	-34.90	-35.09	-35.30	-35.07	-35.31
Result			Compliance					

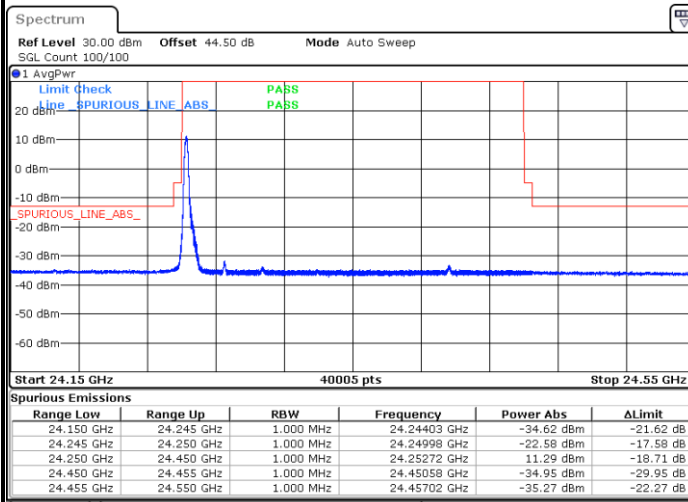
Mode			CP-OFDM Module 1 NR Band n258a: BE (dBm) Full RB					
BW			50MHz			100MHz		
Limit (dBm)			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Low CH	0~10%OB	≤ -5	-30.31	-31.37	-33.27	-32.22	-30.02	-34.31
	>10%OB	≤ -13	-31	-32.49	-34.09	-32.49	-30.8	-34.33
High CH	0~10%OB	≤ -5	-27.81	-30.39	-33.03	-31.3	-32.39	-34.28
	>10%OB	≤ -13	-29.56	-31.63	-33.88	-32.04	-32.92	-34.67
Result			Compliance					



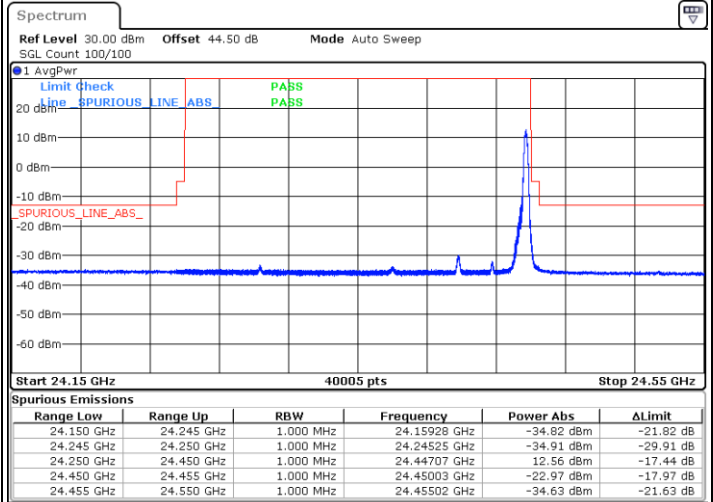
CP-OFDM Module 1

NR Band n258a/ 50MHz / QPSK

Lowest Band Edge / 1 RB

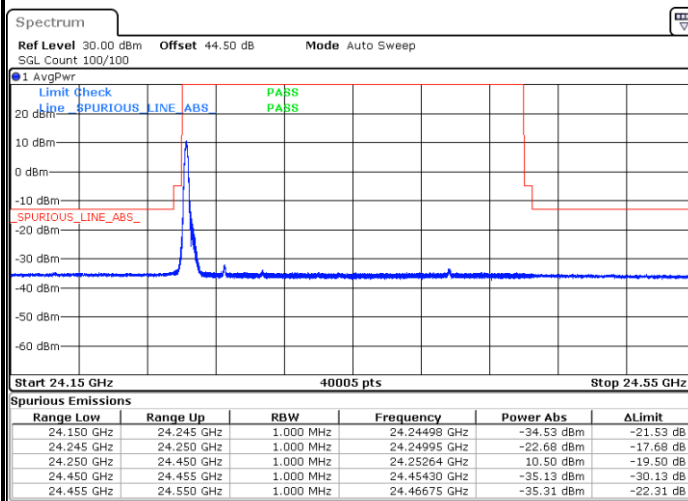


Highest Band Edge / 1 RB

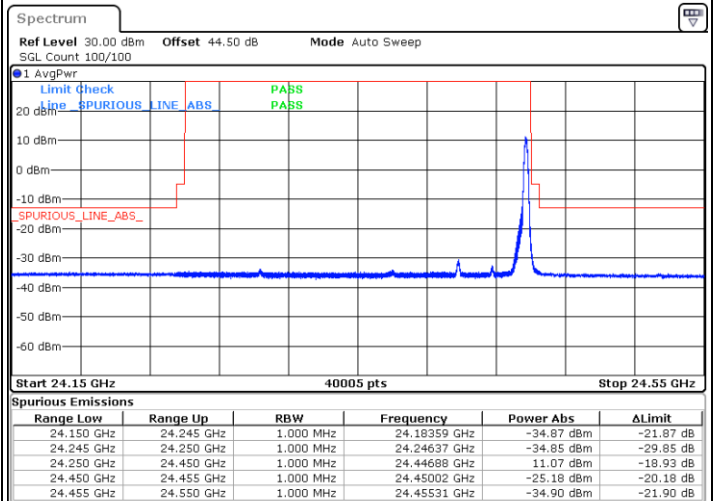


NR Band n258a/ 50MHz / 16QAM

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB

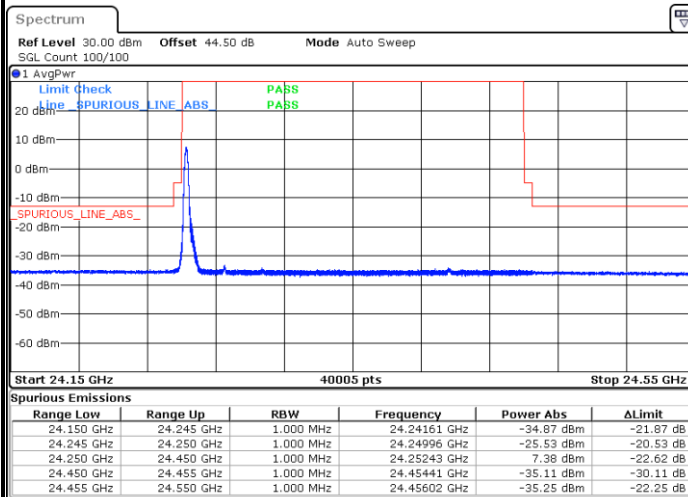




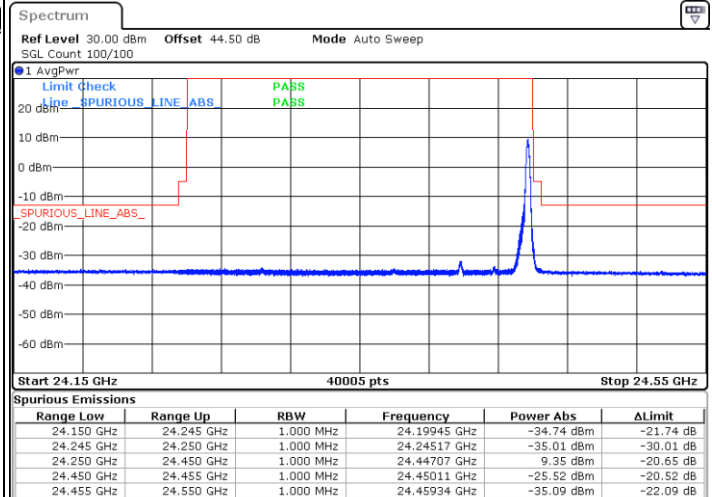
CP-OFDM Module 1

NR Band n258a/ 50MHz / 64QAM

Lowest Band Edge / 1 RB

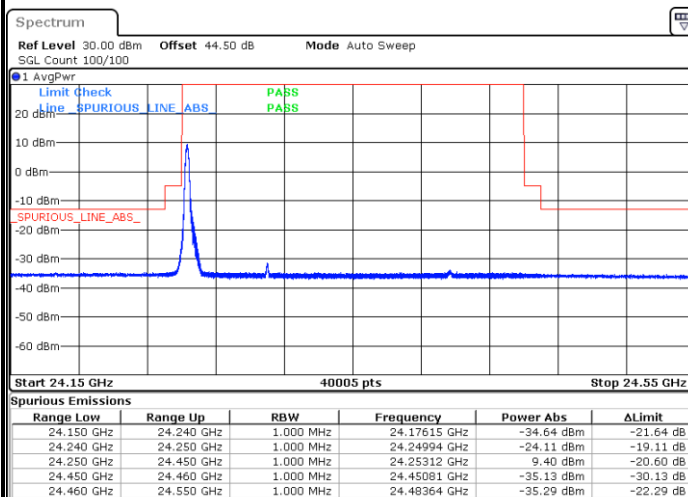


Highest Band Edge / 1 RB

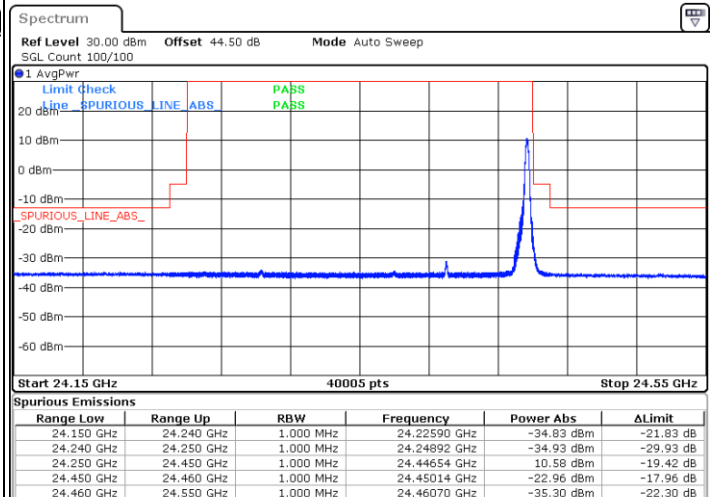


NR Band n258a/ 100MHz / QPSK

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB

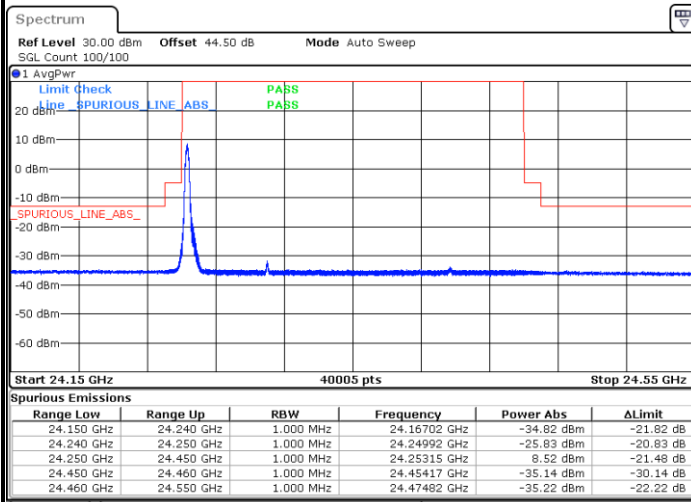




CP-OFDM Module 1

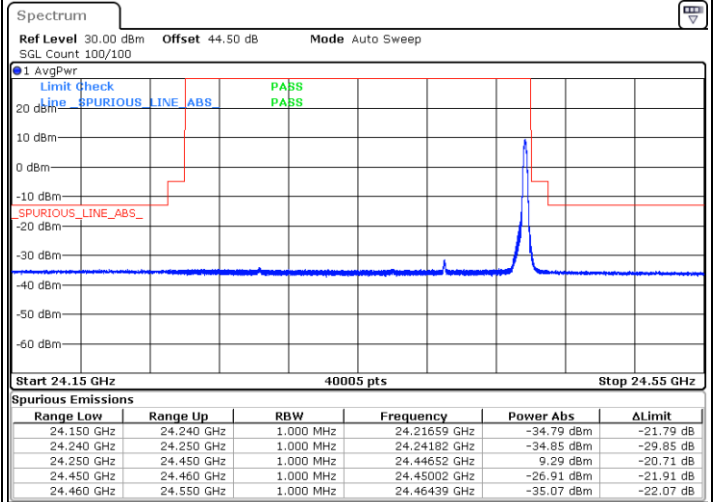
NR Band n258a/ 100MHz / 16QAM

Lowest Band Edge / 1 RB



Date: 26.JUL.2020 09:58:22

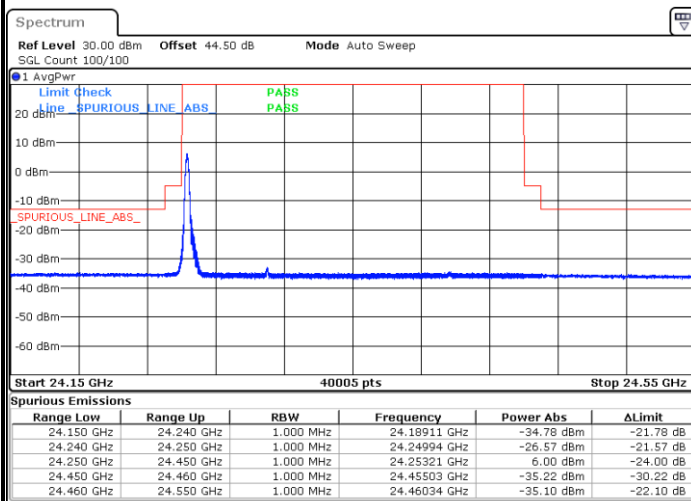
Highest Band Edge / 1 RB



Date: 26.JUL.2020 11:00:33

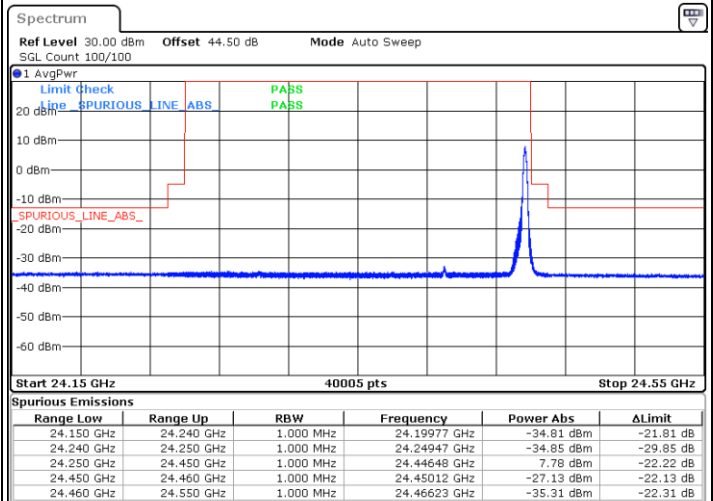
NR Band n258a/ 100MHz / 64QAM

Lowest Band Edge / 1 RB



Date: 26.JUL.2020 09:57:29

Highest Band Edge / 1 RB



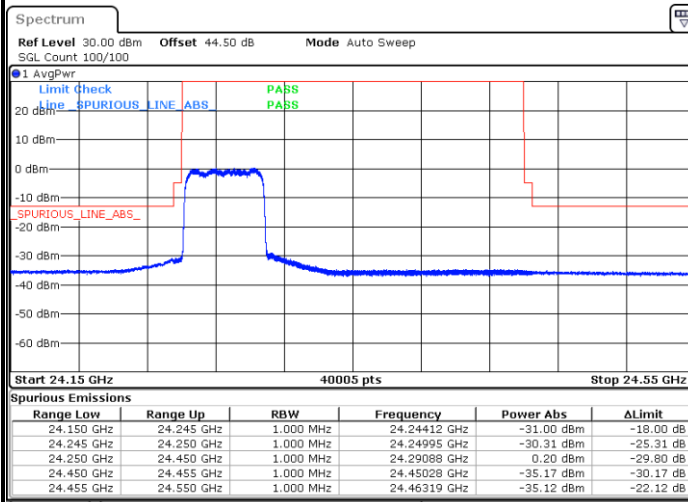
Date: 26.JUL.2020 11:01:11



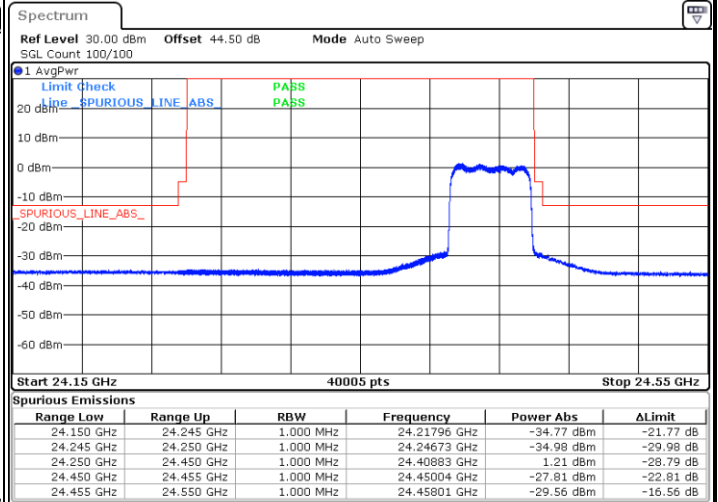
CP-OFDM Module 1

NR Band n258a/ 50MHz / QPSK

Lowest Band Edge / Full RB

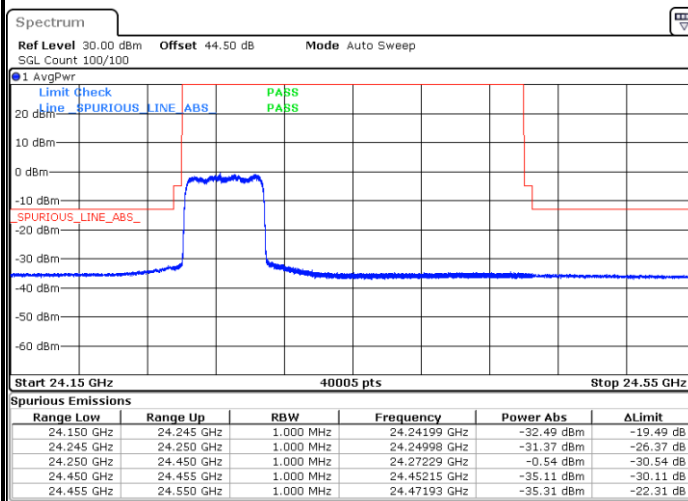


Highest Band Edge / Full RB

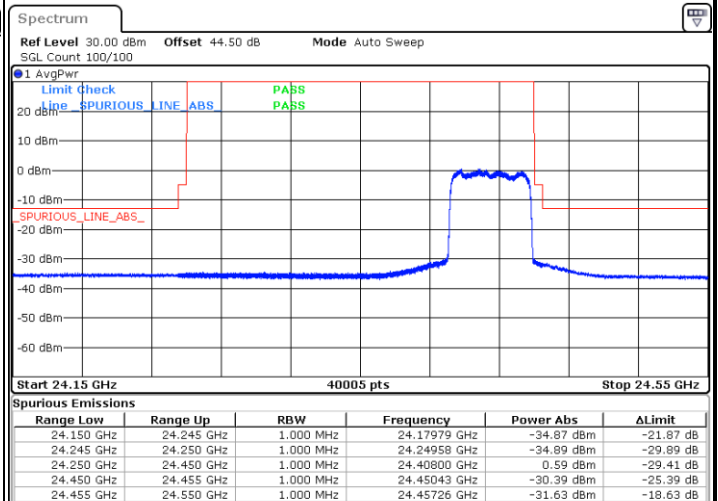


NR Band n258a/ 50MHz / 16QAM

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

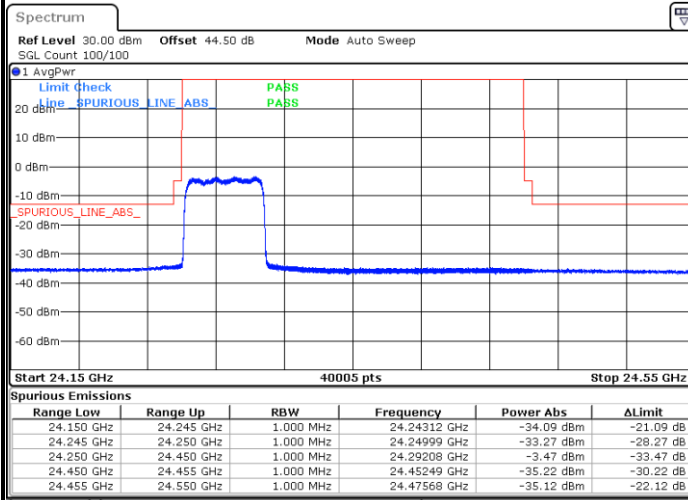




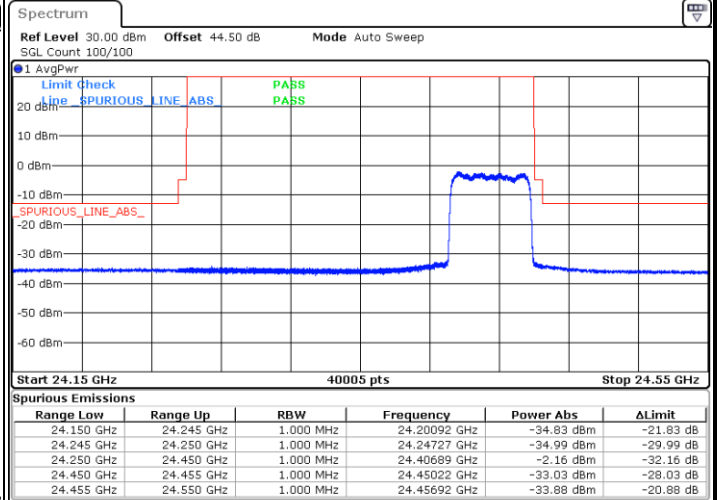
CP-OFDM Module 1

NR Band n258a/ 50MHz / 64QAM

Lowest Band Edge / Full RB

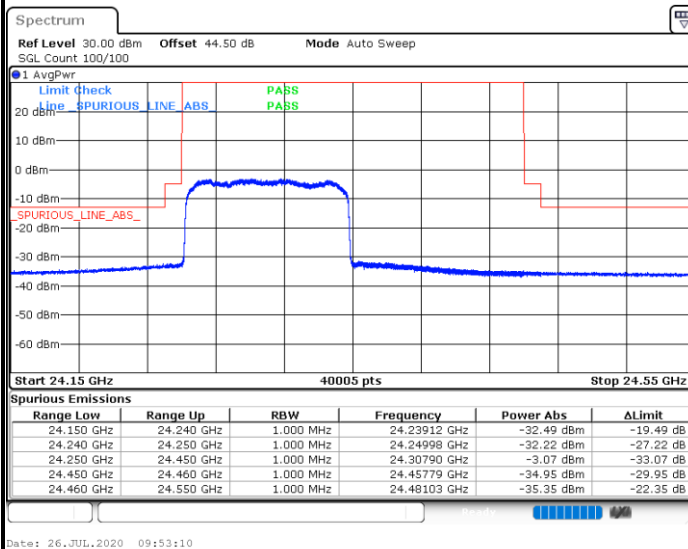


Highest Band Edge / Full RB

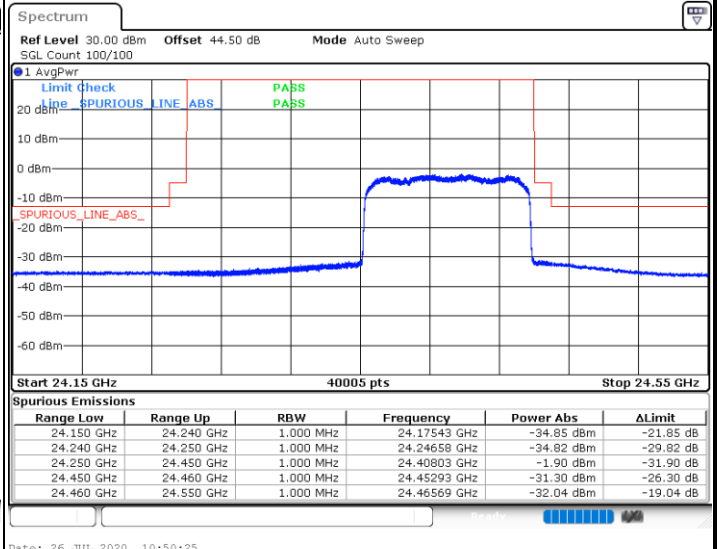


NR Band n258a/ 100MHz / QPSK

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

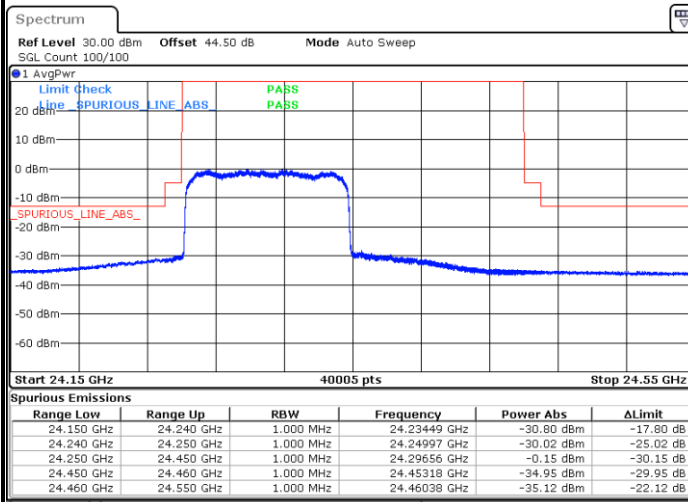




CP-OFDM Module 1

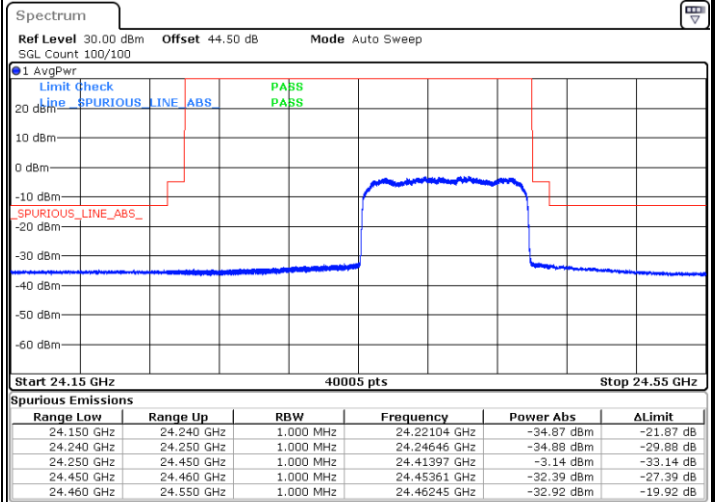
NR Band n258a/ 100MHz / 16QAM

Lowest Band Edge / Full RB



Date: 26.JUL.2020 09:35:46

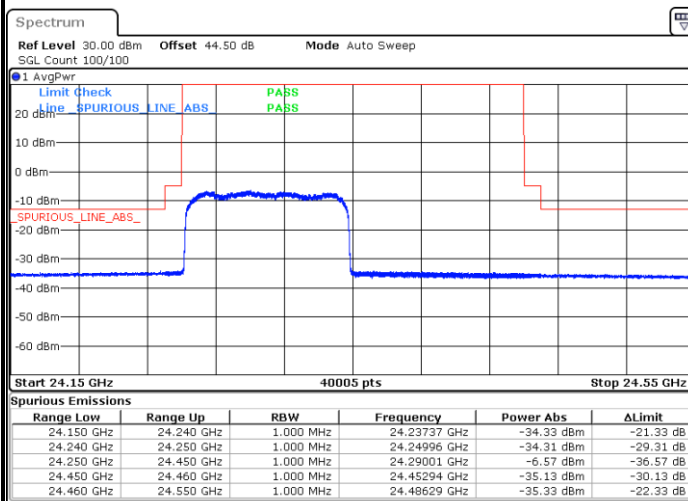
Highest Band Edge / Full RB



Date: 26.JUL.2020 10:51:40

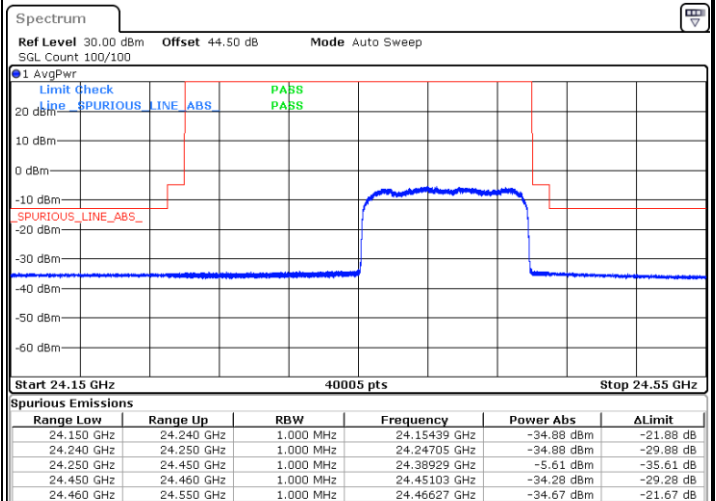
NR Band n258a/ 100MHz / 64QAM

Lowest Band Edge / Full RB



Date: 26.JUL.2020 09:55:48

Highest Band Edge / Full RB



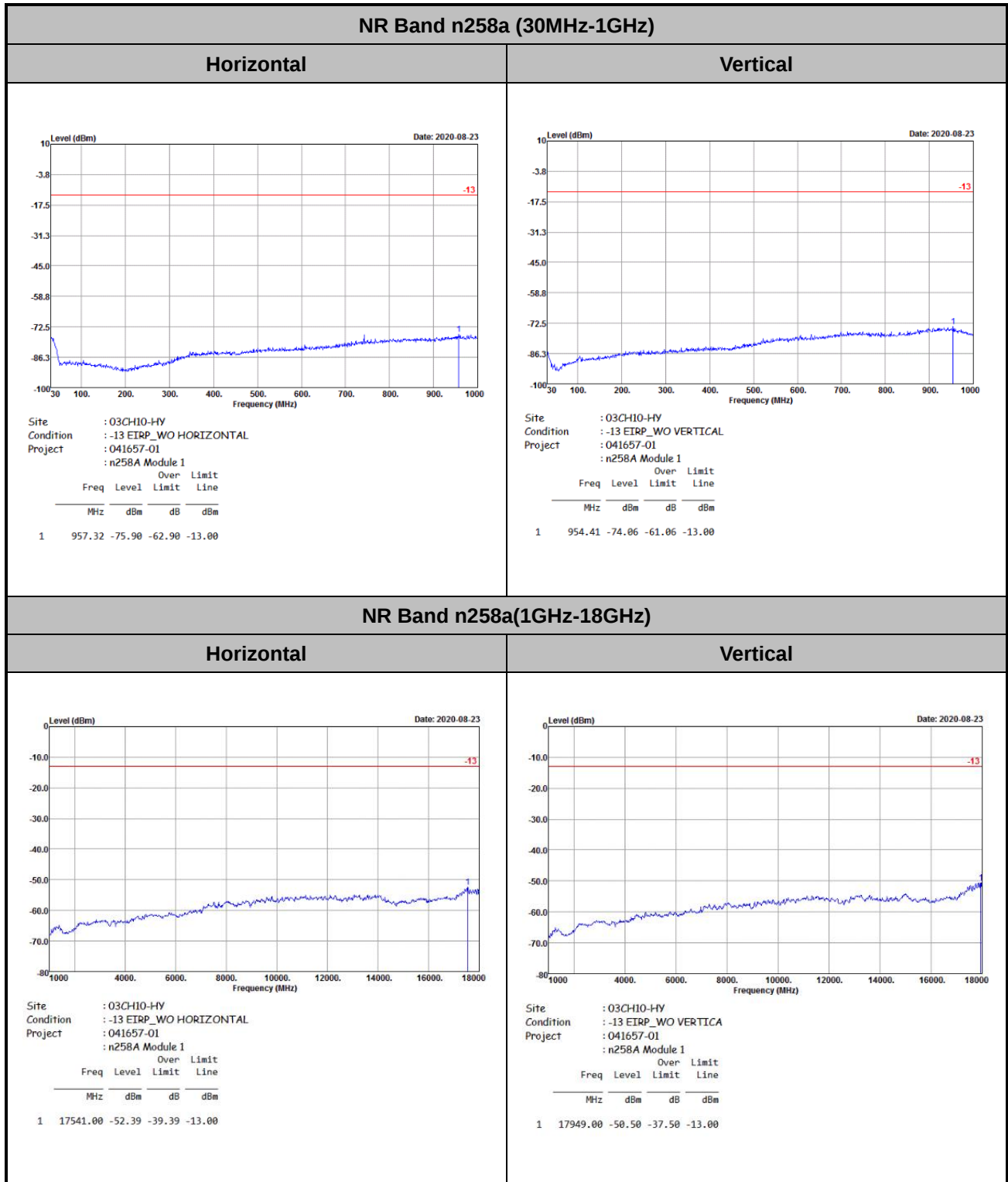
Date: 26.JUL.2020 10:53:01



Spurious Emission

There is no significant spurious emission signal found for frequency started from 30MHz up to 18GHz.

Only the noise floor is reported.



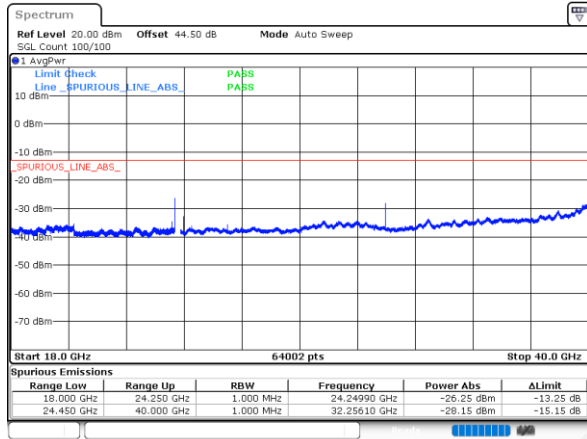


Spurious emission between 18GHz to 40GHz worst case plot is reported as following.

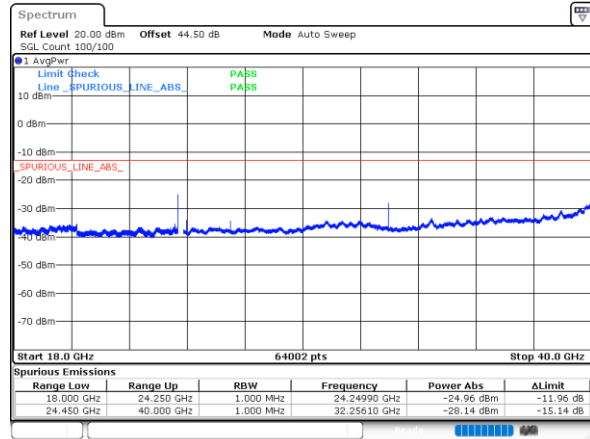
CP-OFDM Module 1

NR Band n258aQPSK (18-40GHz)

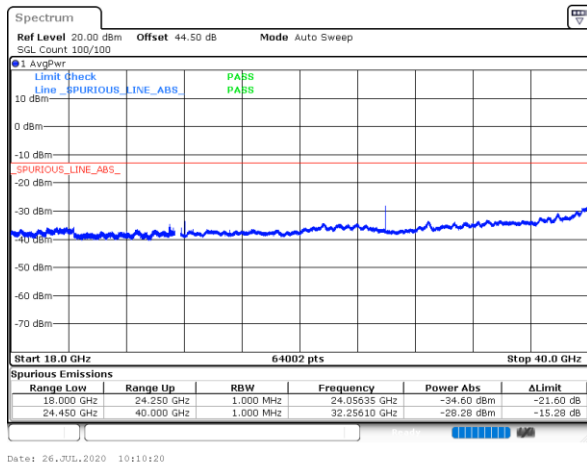
Lowest Channel / 50MHz



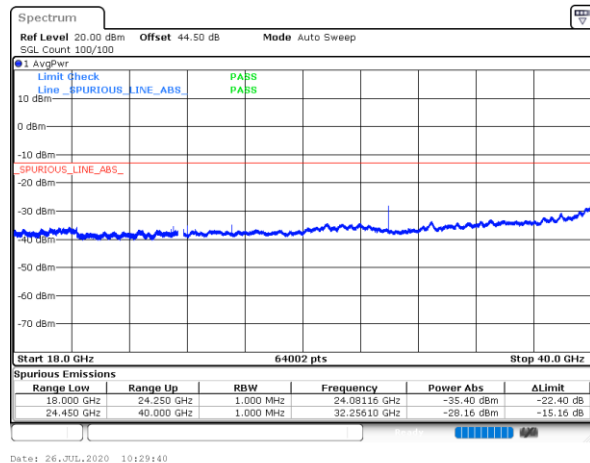
Lowest Channel / 100MHz



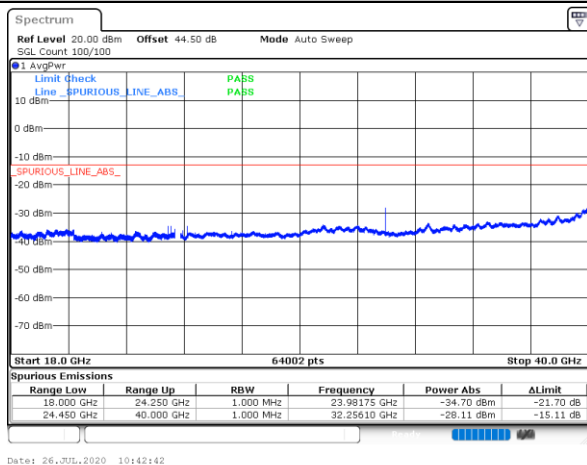
Middle Channel / 50MHz



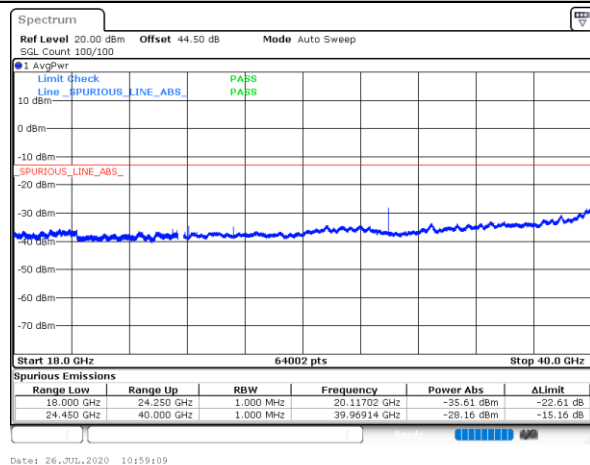
Middle Channel / 100MHz



Highest Channel / 50MHz

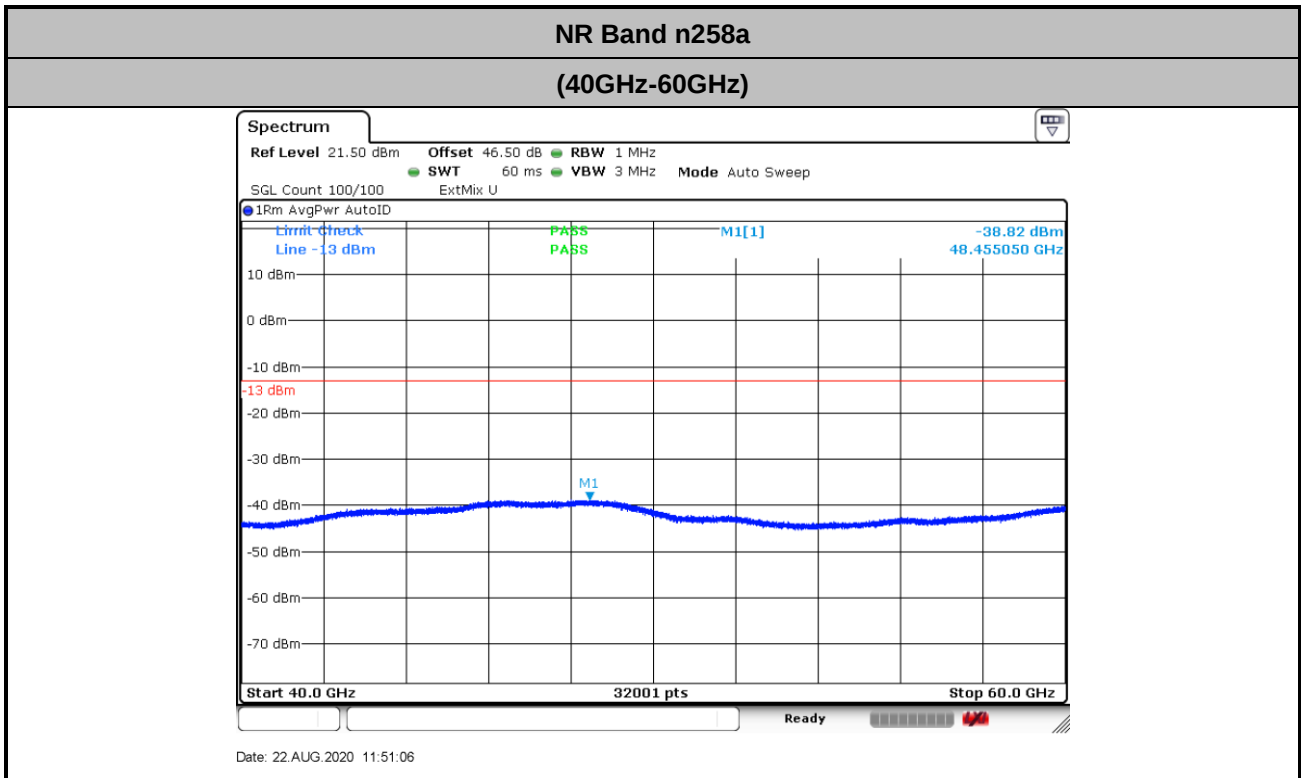


Highest Channel / 100MHz

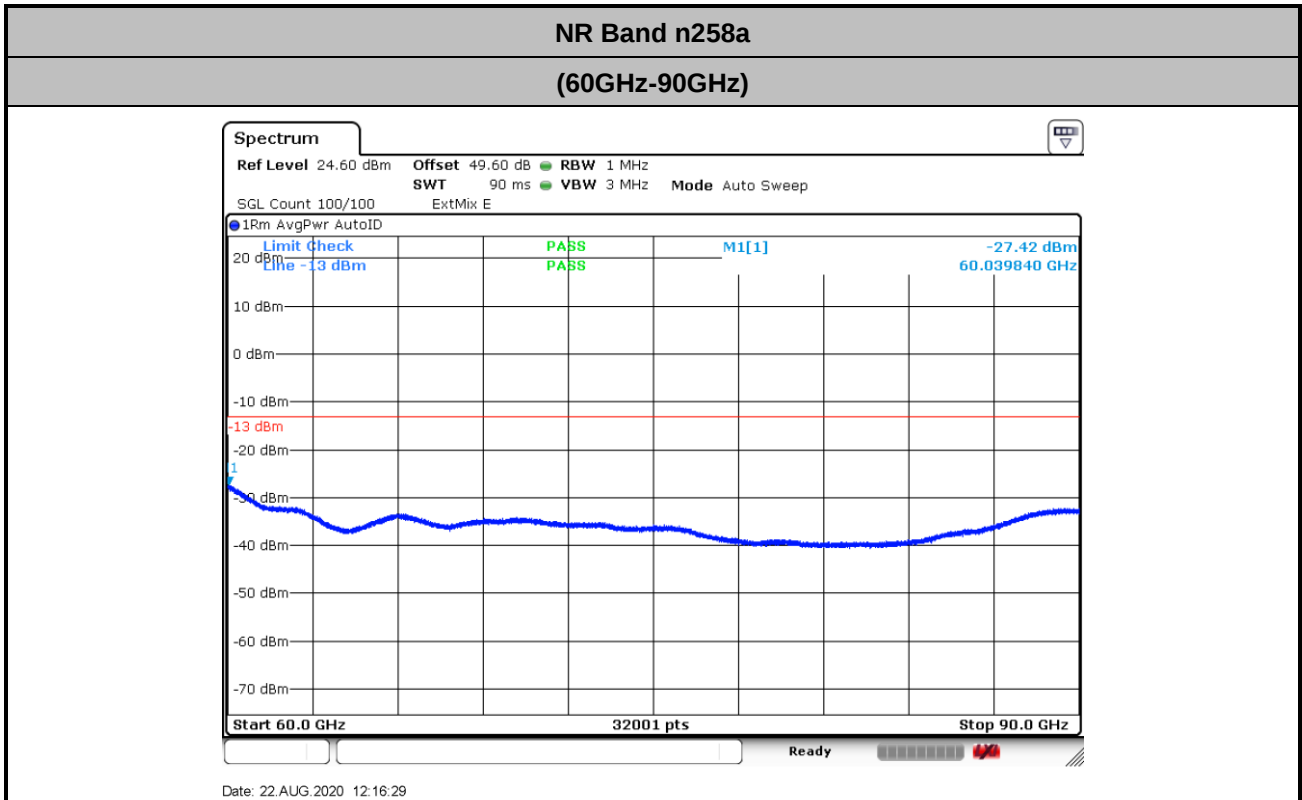




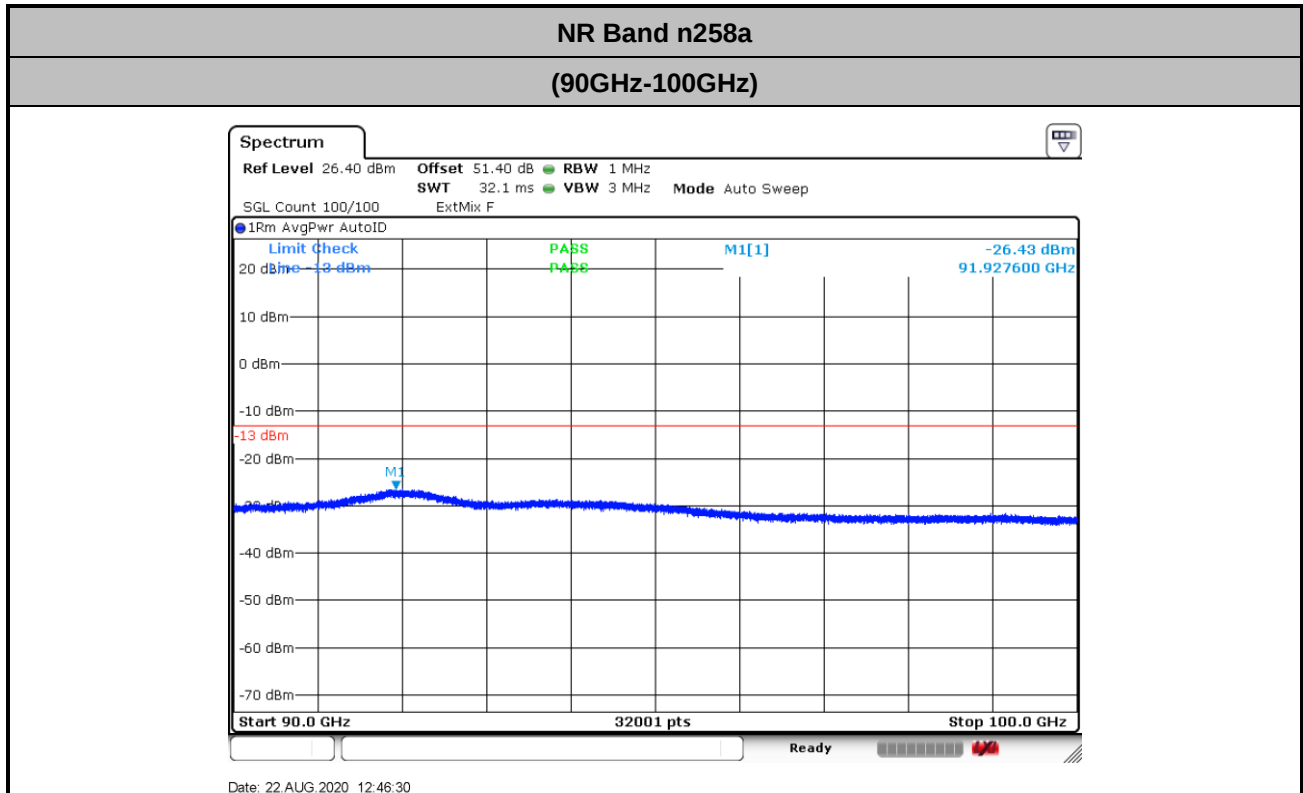
There is no significant spurious emission signal found for frequency started from 40GHz up to 100GHz.
Only the noise floor is reported.



$$\begin{aligned}\text{Offset} &= \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8 \\ &= 42.3 + 2 + 107 + 20\log(1) - 104.8 = 46.5 \text{ (dB)}\end{aligned}$$



$$\begin{aligned}\text{Offset} &= \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8 \\ &= 45.4 + 2 + 107 + 20\log(1) - 104.8 = 49.6 \text{ (dB)}\end{aligned}$$



$$\begin{aligned} \text{Offset} &= \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8 \\ &= 47.2 + 2 + 107 + 20\log(1) - 104.8 = 51.4 \text{ (dB)} \end{aligned}$$

NR Band n258a

Frequency Stability

Test Conditions		NR Band n258a / Middle Channel			Limit
Temperature (°C)	Voltage (Volt)	CW tone			Note 2.
		Frequency (GHz)	Deviation (kHz)	Deviation (ppm)	Result
50	Normal Voltage	24.3501379	-137.900	4.938	Pass
40	Normal Voltage	24.3500979	-97.900	3.506	
30	Normal Voltage	24.3500679	-67.900	2.432	
20(Ref.)	Normal Voltage	24.35	0.000	0.000	
10	Normal Voltage	24.349968	32.000	1.146	
0	Normal Voltage	24.3499481	51.900	1.859	
-10	Normal Voltage	24.3499281	71.900	2.575	
-20	Normal Voltage	24.3498881	111.900	4.007	
-30	Normal Voltage	24.3498382	161.800	5.794	
20	Maximum Voltage	24.350029	-29.000	1.038	
20	Normal Voltage	24.35002	-20.000	0.716	
20	Battery End Point	24.349979	21.000	0.752	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.3 V. ; Maximum Voltage =4.25 V.
2. The frequency fundamental emissions stay within the operation band.



NR Band n258b Module 0 AG0

Occupied Bandwidth

Mode	DFT-s-OFDM Module 0 NR Band n258b: 99%OBW(MHz)							
BW	50MHz				100MHz			
Mod.	BPSK	QPSK	16QAM	64QAM	BPSK	QPSK	16QAM	64QAM
Lowest CH	45.26	45.22	45.40	45.08	90.36	90.12	90.12	90.20
Middle CH	45.20	45.22	45.20	45.34	90.48	90.44	90.12	90.40
Highest CH	45.20	45.20	45.28	45.30	90.56	90.36	90.08	90.44

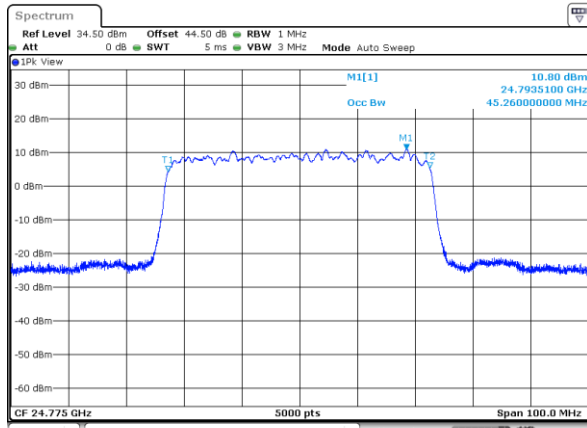
Mode	CP-OFDM Module 0 NR Band n258b: 99%OBW(MHz)					
BW	50MHz			100MHz		
Mod.	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Lowest CH	45.30	45.16	45.14	92.68	92.84	93.16
Middle CH	45.42	45.44	45.20	93.08	92.92	92.92
Highest CH	45.42	45.46	45.24	93.08	93.04	93.12



DFT-s-OFDM Module 0

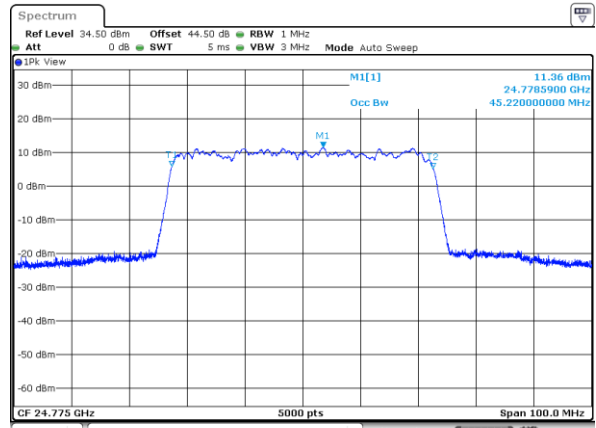
NR Band n258b

Lowest Channel / 50MHz / BPSK



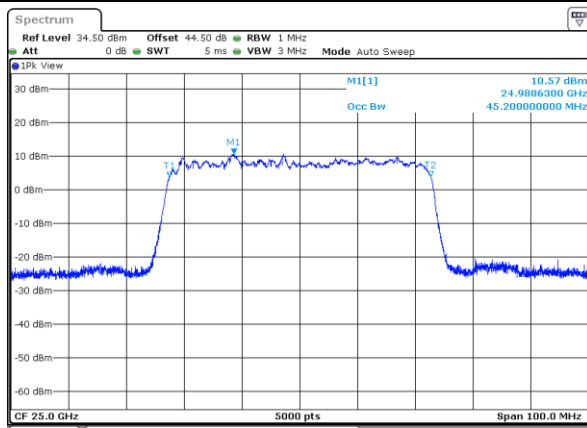
Date: 31.JUL.2020 04:09:00

Lowest Channel / 50MHz / QPSK



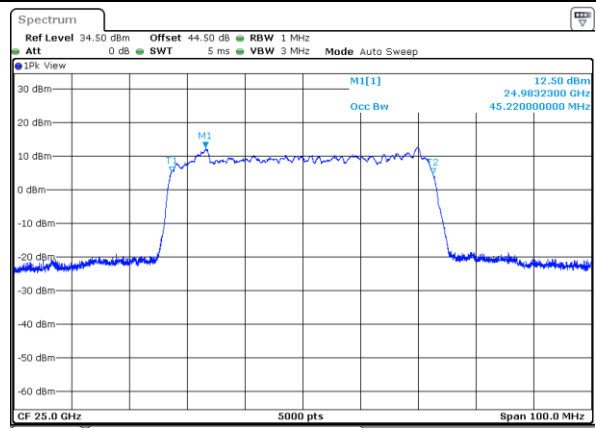
Date: 31.JUL.2020 03:54:43

Middle Channel / 50MHz / BPSK



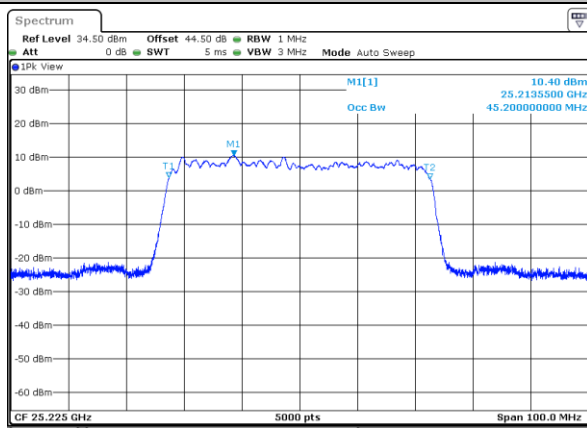
Date: 31.JUL.2020 15:20:20

Middle Channel / 50MHz / QPSK



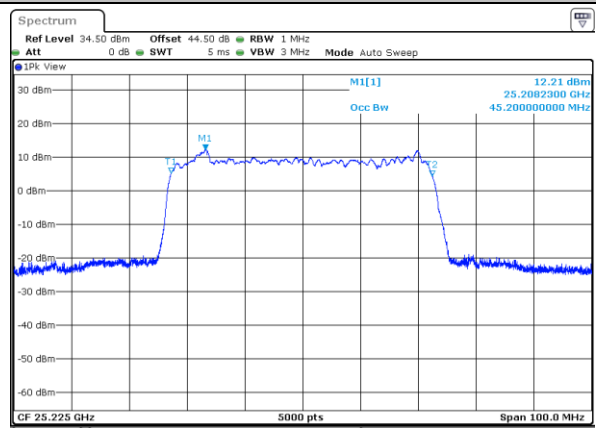
Date: 31.JUL.2020 15:17:10

Highest Channel / 50MHz / BPSK



Date: 31.JUL.2020 16:46:49

Highest Channel / 50MHz / QPSK



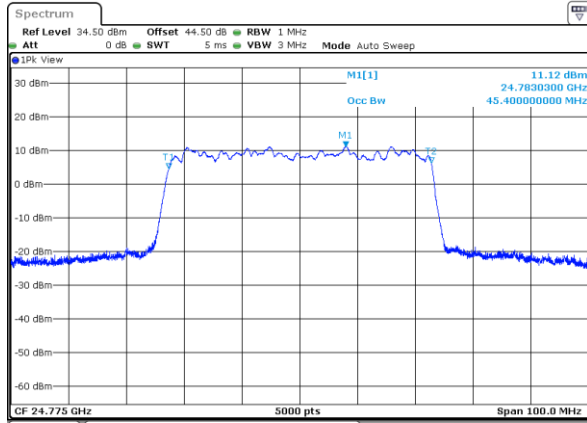
Date: 31.JUL.2020 16:59:20



DFT-s-OFDM Module 0

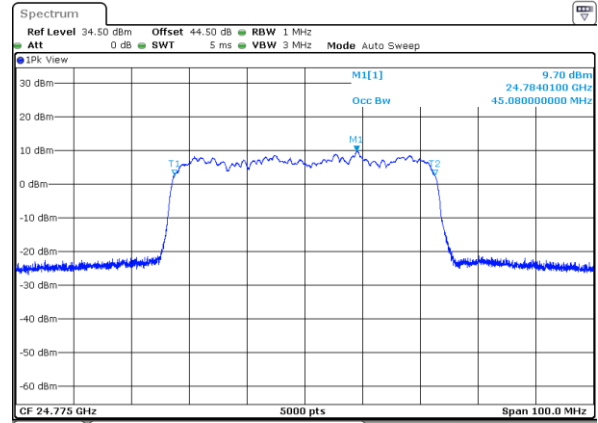
NR Band n258b

Lowest Channel / 50MHz / 16QAM



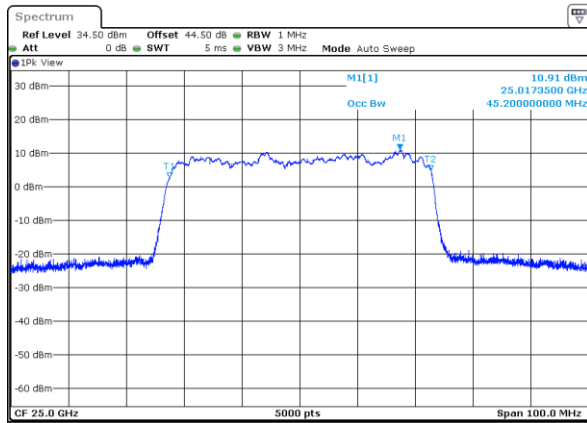
Date: 31.JUL.2020 05:16:40

Lowest Channel / 50MHz / 64QAM



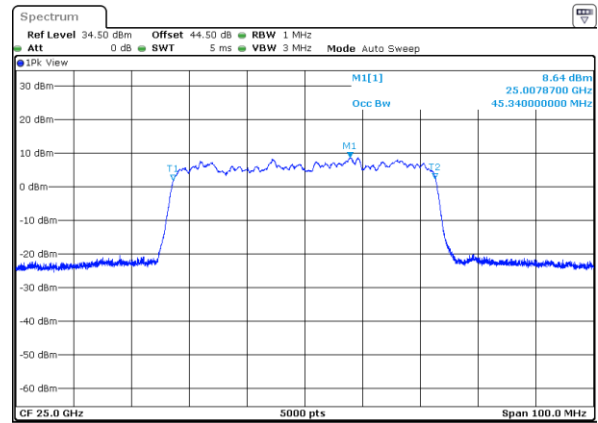
Date: 31.JUL.2020 04:06:40

Middle Channel / 50MHz / 16QAM



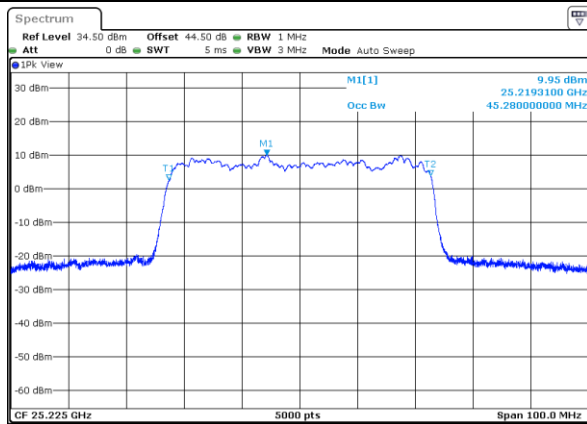
Date: 31.JUL.2020 15:18:07

Middle Channel / 50MHz / 64QAM



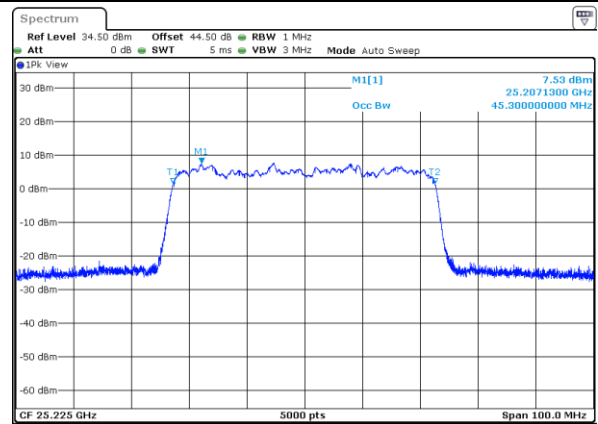
Date: 31.JUL.2020 15:19:41

Highest Channel / 50MHz / 16QAM



Date: 31.JUL.2020 17:01:07

Highest Channel / 50MHz / 64QAM



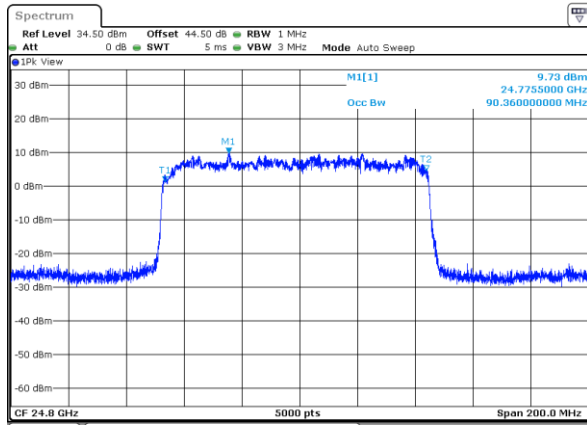
Date: 31.JUL.2020 17:02:41



DFT-s-OFDM Module 0

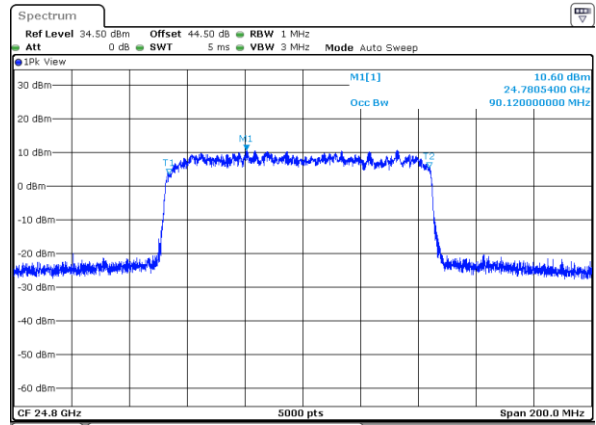
NR Band n258b

Lowest Channel / 100MHz / BPSK



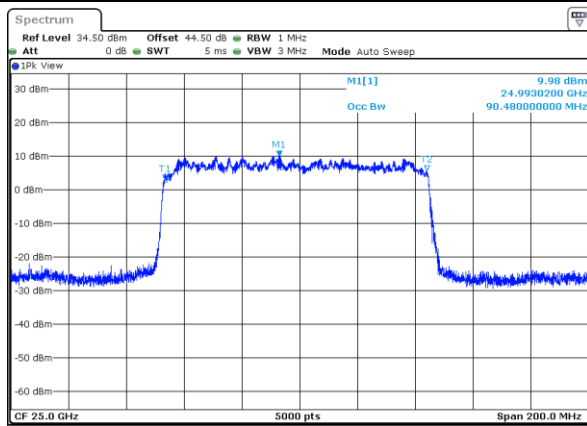
Date: 31.JUL.2020 06:34:45

Lowest Channel / 100MHz / QPSK



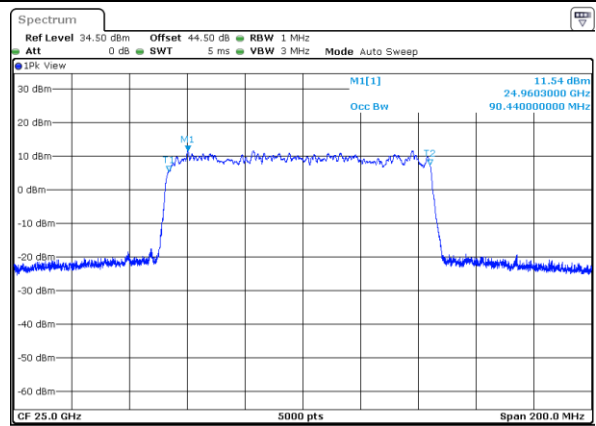
Date: 31.JUL.2020 06:33:08

Middle Channel / 100MHz / BPSK



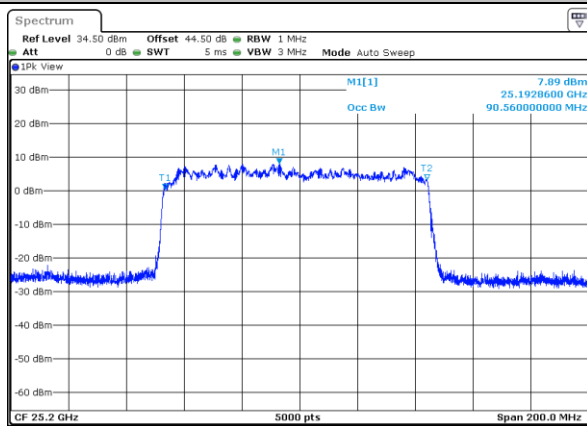
Date: 31.JUL.2020 15:46:32

Middle Channel / 100MHz / QPSK



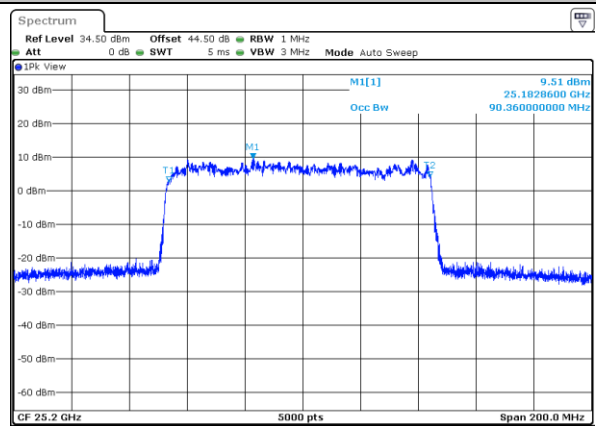
Date: 31.JUL.2020 15:45:49

Highest Channel / 100MHz / BPSK



Date: 31.JUL.2020 20:25:30

Highest Channel / 100MHz / QPSK



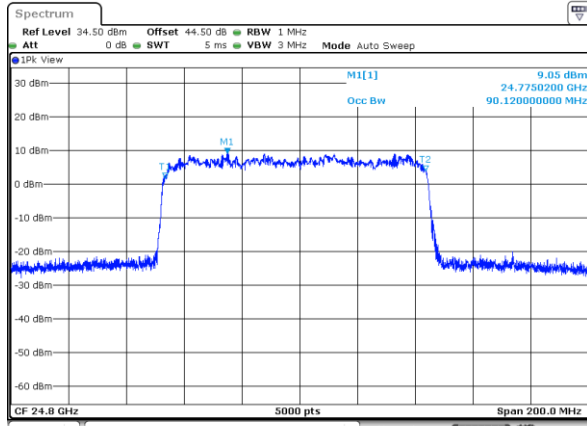
Date: 31.JUL.2020 20:21:55



DFT-s-OFDM Module 0

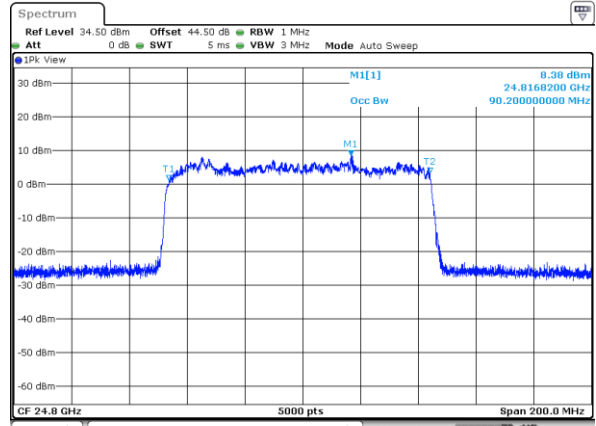
NR Band n258b

Lowest Channel / 100MHz / 16QAM



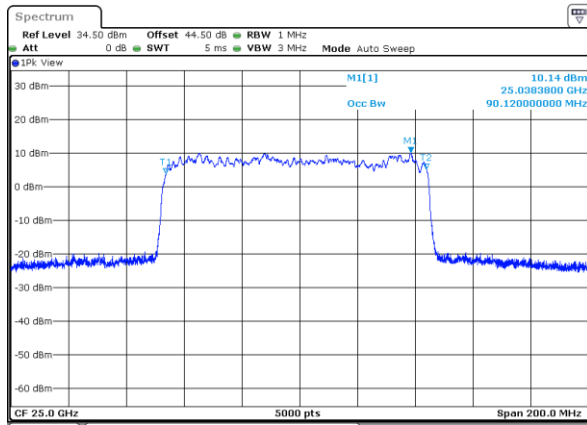
Date: 31.JUL.2020 06:31:09

Lowest Channel / 100MHz / 64QAM



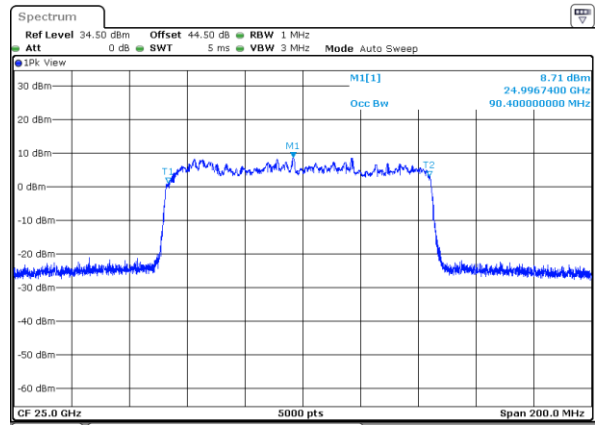
Date: 31.JUL.2020 06:28:13

Middle Channel / 100MHz / 16QAM



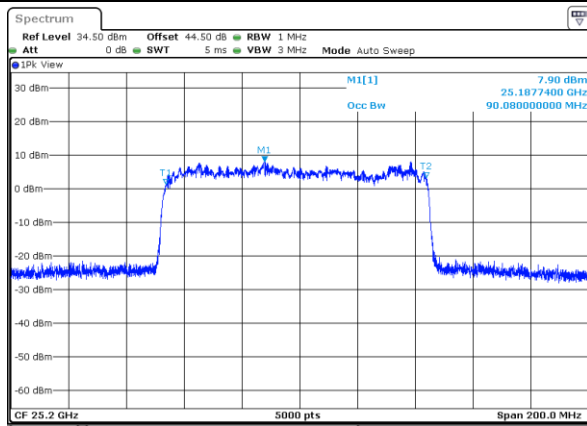
Date: 31.JUL.2020 15:47:51

Middle Channel / 100MHz / 64QAM



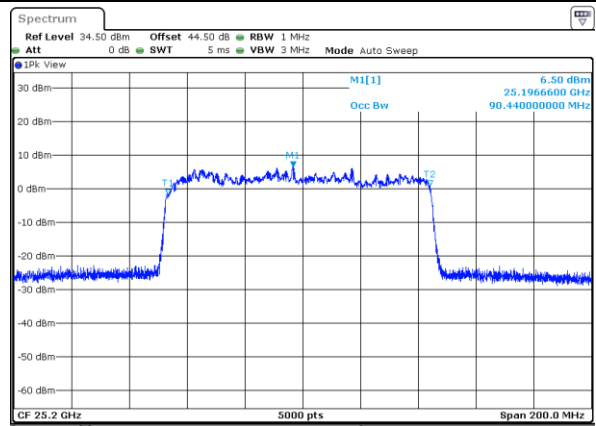
Date: 31.JUL.2020 15:48:46

Highest Channel / 100MHz / 16QAM



Date: 31.JUL.2020 20:23:12

Highest Channel / 100MHz / 64QAM



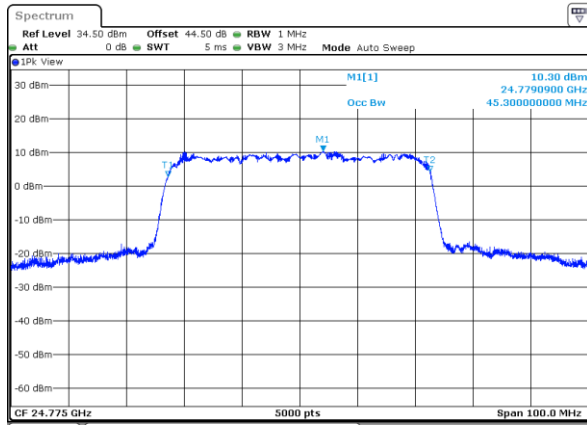
Date: 31.JUL.2020 20:24:20



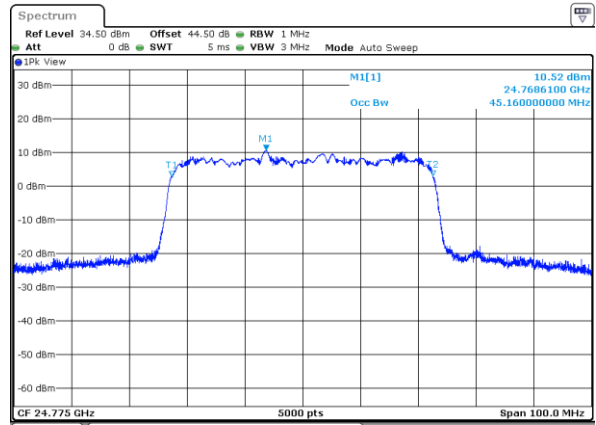
CP-OFDM Module 0

NR Band n258b

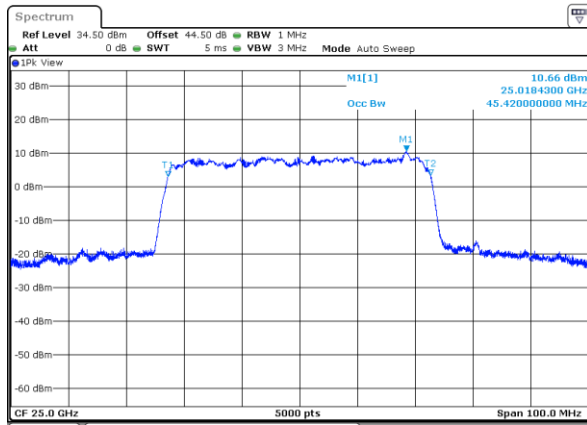
Lowest Channel / 50MHz / QPSK



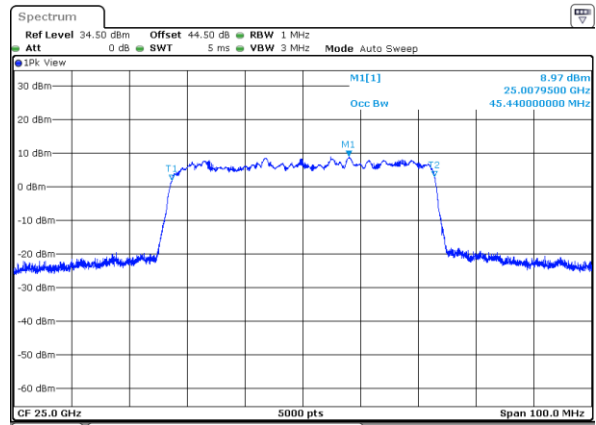
Lowest Channel / 50MHz / 16QAM



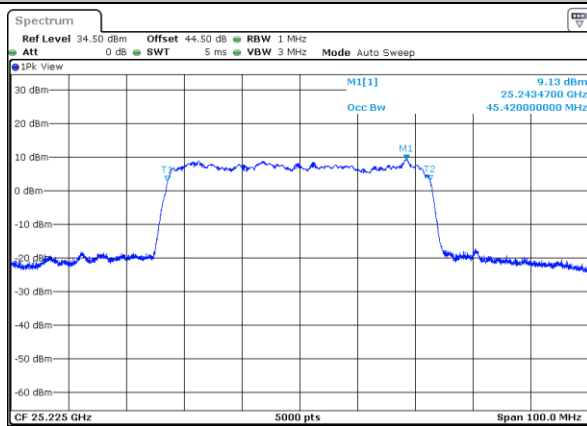
Middle Channel / 50MHz / QPSK



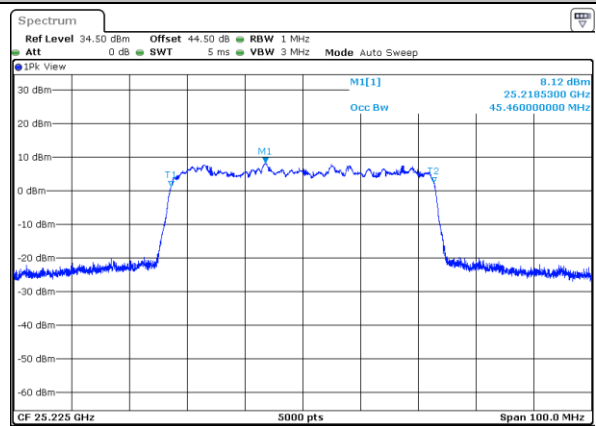
Middle Channel / 50MHz / 16QAM



Highest Channel / 50MHz / QPSK



Highest Channel / 50MHz / 16QAM

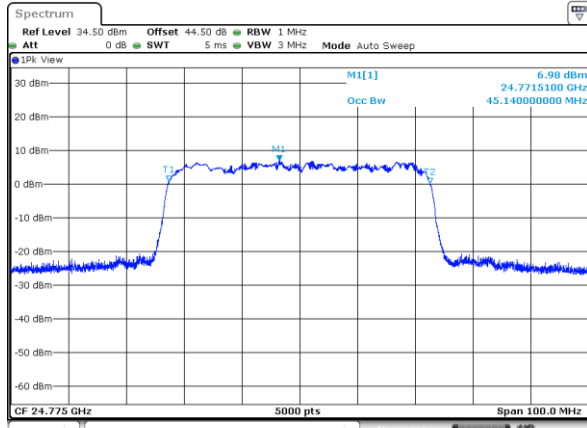




CP-OFDM Module 0

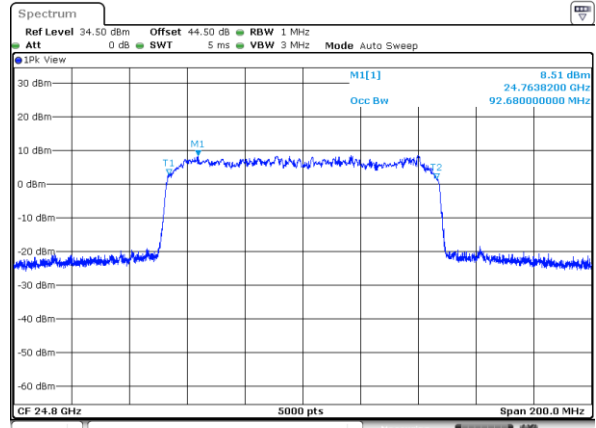
NR Band n258b

Lowest Channel / 50MHz / 64QAM



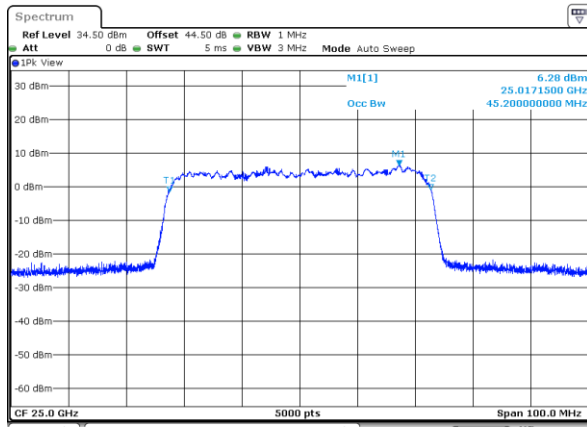
Date: 31.JUL.2020 05:06:02

Lowest Channel / 100MHz / QPSK



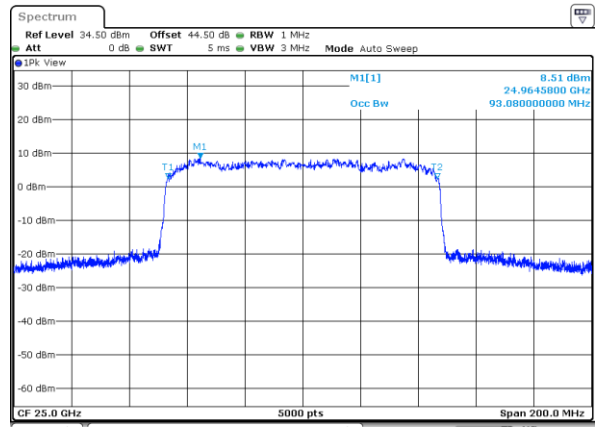
Date: 31.JUL.2020 07:09:22

Middle Channel / 50MHz / 64QAM



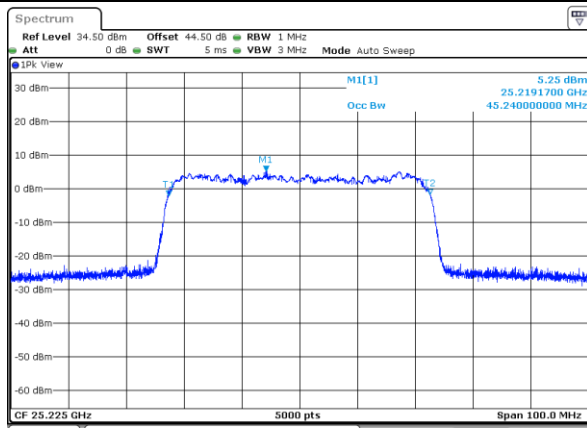
Date: 31.JUL.2020 15:23:42

Middle Channel / 100MHz / QPSK



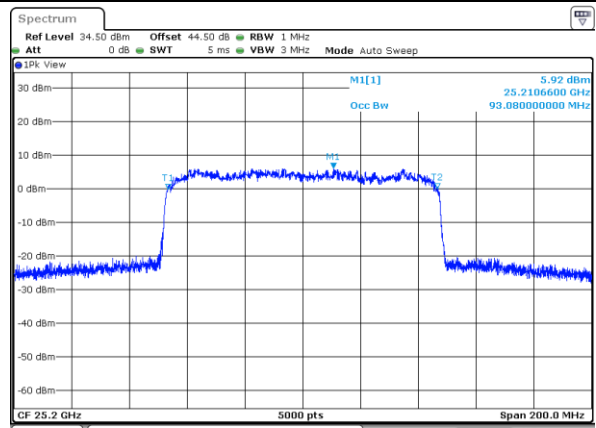
Date: 31.JUL.2020 15:49:50

Highest Channel / 50MHz / 64QAM



Date: 31.JUL.2020 17:11:44

Highest Channel / 100MHz / QPSK



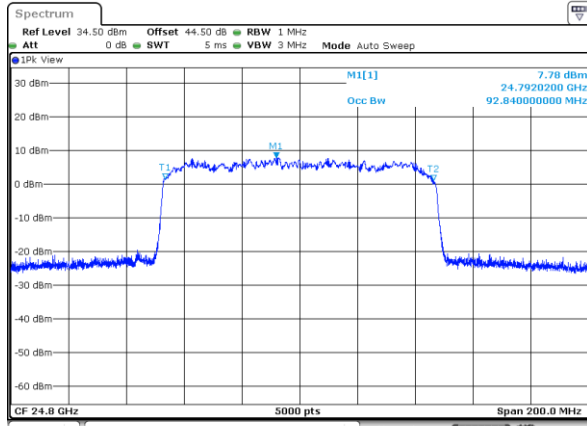
Date: 31.JUL.2020 20:47:06



CP-OFDM Module 0

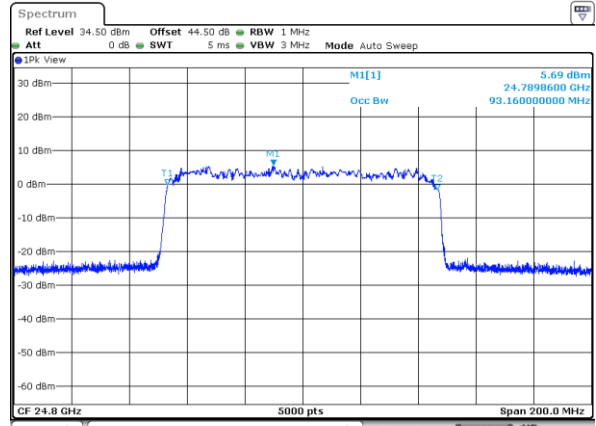
NR Band n258b

Lowest Channel / 100MHz / 16QAM



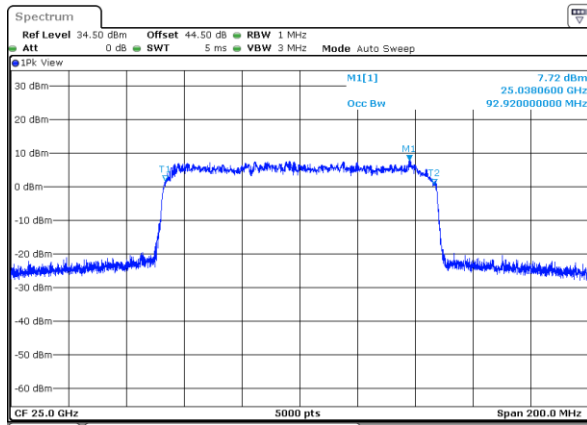
Date: 31.JUL.2020 07:06:26

Lowest Channel / 100MHz / 64QAM



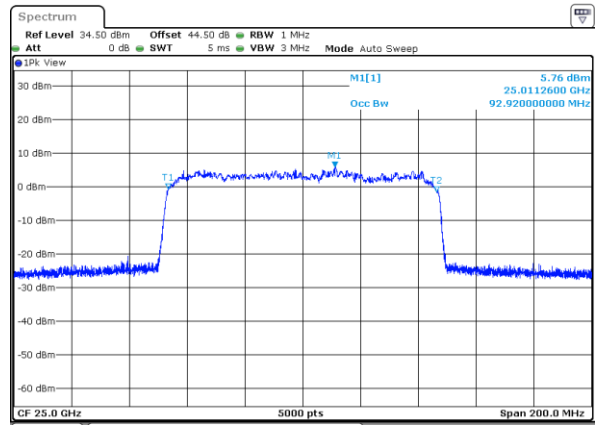
Date: 31.JUL.2020 07:03:56

Middle Channel / 100MHz / 16QAM



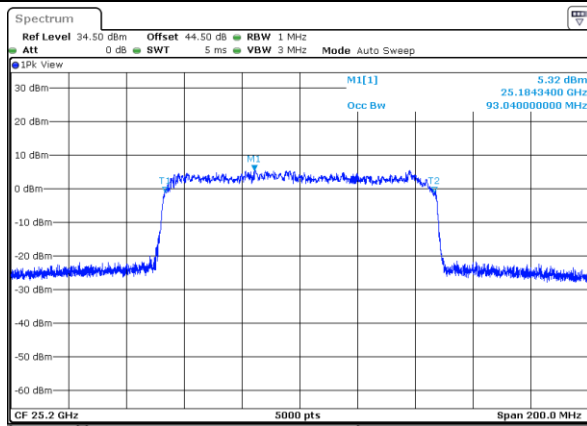
Date: 31.JUL.2020 15:56:41

Middle Channel / 100MHz / 64QAM



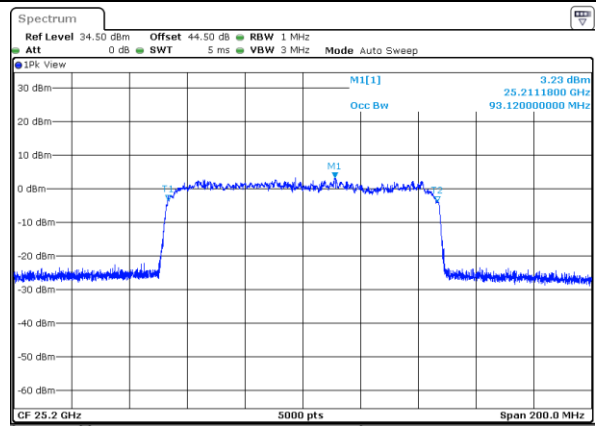
Date: 31.JUL.2020 15:51:34

Highest Channel / 100MHz / 16QAM



Date: 31.JUL.2020 20:48:11

Highest Channel / 100MHz / 64QAM



Date: 31.JUL.2020 20:49:26

Radiated Out of Band Emissions

Mode			DFT-s-OFDM Module 0 NR Band n258b: BE (dBm) 1 RB							
BW			50MHz				100MHz			
Limit (dBm)			BPSK	QPSK	16QAM	64QAM	BPSK	QPSK	16QAM	64QAM
Low CH	0~10%OB	≤ -5	-20.2	-18.03	-18.69	-21.06	-22.4	-20.18	-21.17	-22.44
	>10%OB	≤ -13	-31.91	-31.67	-31.91	-32.29	-32.11	-32.2	-32.42	-32.57
High CH	0~10%OB	≤ -5	-20.95	-18.29	-19.80	-22.19	-23.94	-22.01	-22.62	-26.21
	>10%OB	≤ -13	-32.96	-32.83	-32.99	-32.87	-32.98	-33.08	-32.96	-33.06
Result			Compliance							

Mode			CP-OFDM Module 0 NR Band n258b: BE (dBm) 1 RB					
BW			50MHz			100MHz		
Limit (dBm)			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Low CH	0~10%OB	≤ -5	-21.89	-20.75	-23.5	-22.2	-22.32	-25.2
	>10%OB	≤ -13	-32.17	-32.4	-32.54	-32.12	-32.62	-32.63
High CH	0~10%OB	≤ -5	-21.04	-20.45	-24.38	-24.47	-23.93	-27.07
	>10%OB	≤ -13	-32.75	-33.07	-33.18	-32.86	-32.98	-32.99
Result			Compliance					

Mode			DFT-s-OFDM Module 0 NR Band n258b: BE (dBm) Full RB							
BW			50MHz				100MHz			
Limit (dBm)			BPSK	QPSK	16QAM	64QAM	BPSK	QPSK	16QAM	64QAM
Low CH	0~10%OB	≤ -5	-28.74	-25.81	-27.34	-29.48	-30.62	-28.83	-30.02	-31.33
	>10%OB	≤ -13	-31.12	-28.28	-28.57	-30.54	-31.89	-29.93	-30.49	-31.81
High CH	0~10%OB	≤ -5	-29.57	-27.51	-28.09	-30.58	-32.09	-30.27	-29.99	-31.6
	>10%OB	≤ -13	-32.4	-29.67	-30.45	-32.18	-32.86	-31.82	-31.71	-32.62
Result			Compliance							

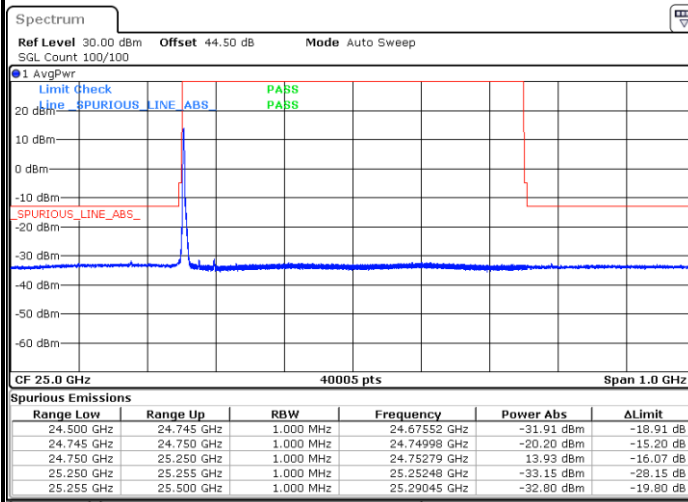
Mode			CP-OFDM Module 0 NR Band n258b: BE (dBm) Full RB					
BW			50MHz			100MHz		
Limit (dBm)			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Low CH	0~10%OB	≤ -5	-26.61	-28.05	-30.49	-29.03	-30.12	-31.43
	>10%OB	≤ -13	-28.29	-29.65	-31.47	-30.15	-30.8	-32.04
High CH	0~10%OB	≤ -5	-27.38	-28.62	-31.12	-29.07	-30.6	-32.04
	>10%OB	≤ -13	-29.58	-31.07	-32.43	-31.11	-31.93	-32.84
Result			Compliance					



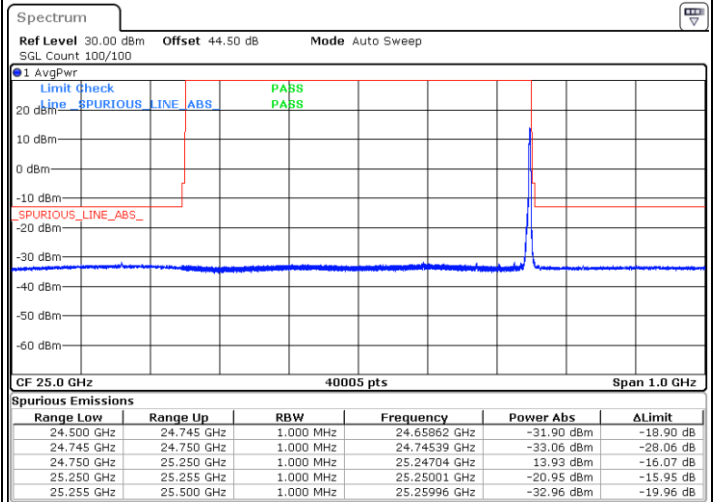
DFT-s-OFDM Module 0

NR Band n258b/ 50MHz / BPSK

Lowest Band Edge / 1 RB

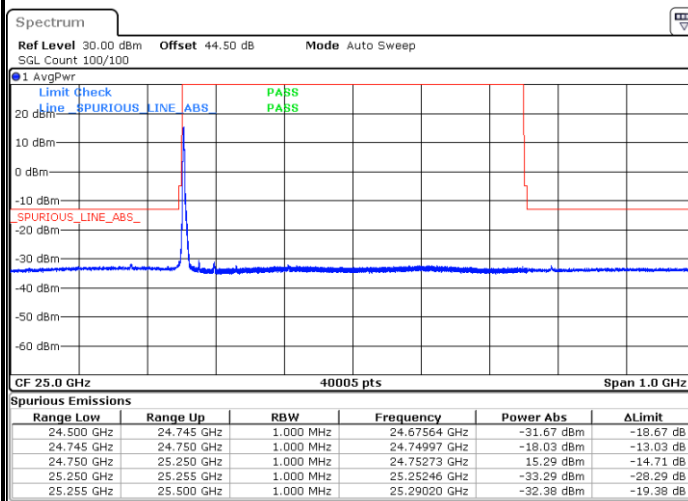


Highest Band Edge / 1 RB

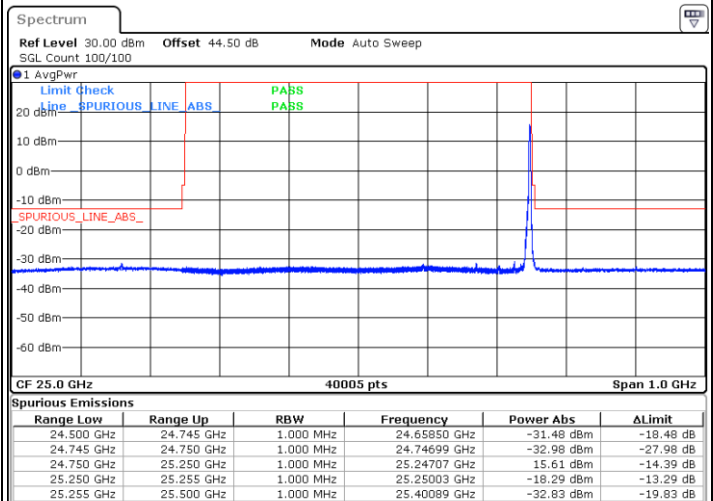


NR Band n258b/ 50MHz / QPSK

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB

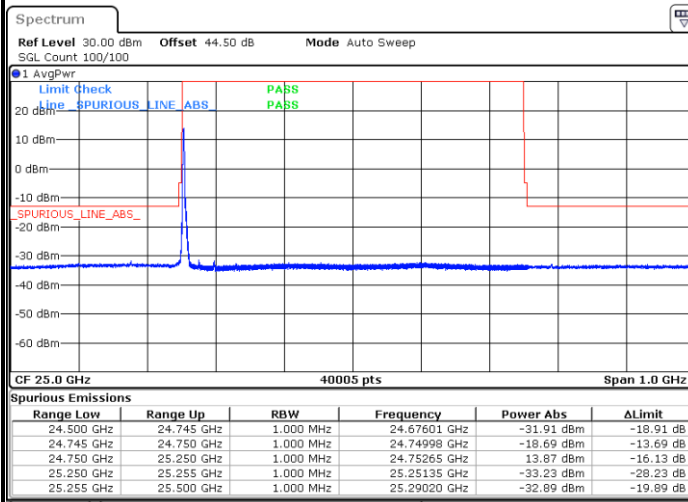




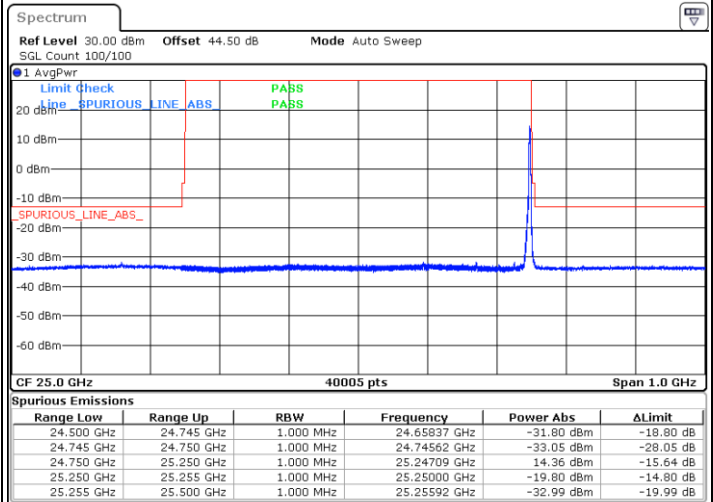
DFT-s-OFDM Module 0

NR Band n258b/ 50MHz / 16QAM

Lowest Band Edge / 1 RB

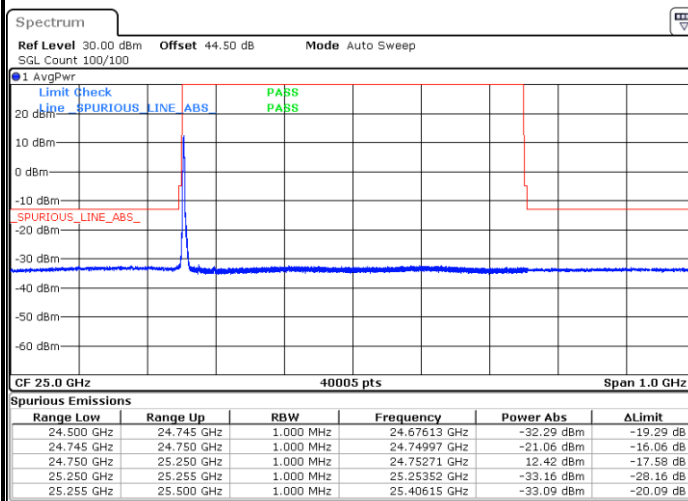


Highest Band Edge / 1 RB

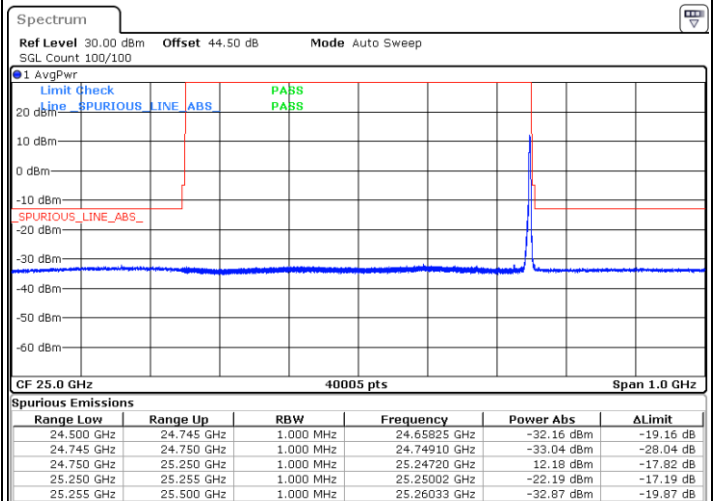


NR Band n258b/ 50MHz / 64QAM

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB

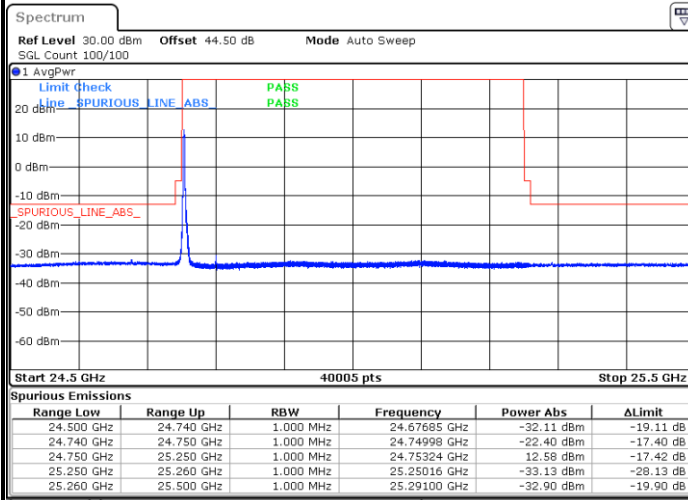




DFT-s-OFDM Module 0

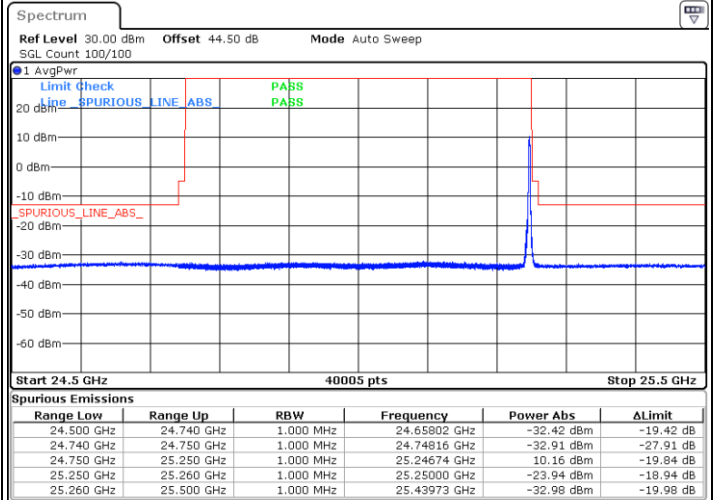
NR Band n258b/ 100MHz / BPSK

Lowest Band Edge / 1 RB



Date: 31.JUL.2020 06:13:45

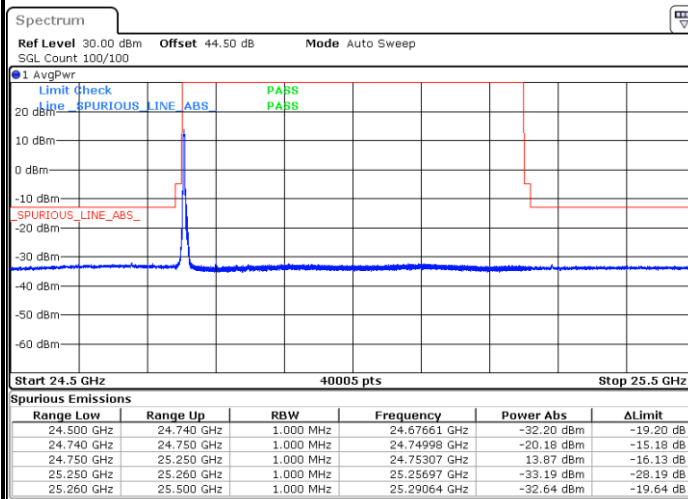
Highest Band Edge / 1 RB



Date: 31.JUL.2020 20:33:49

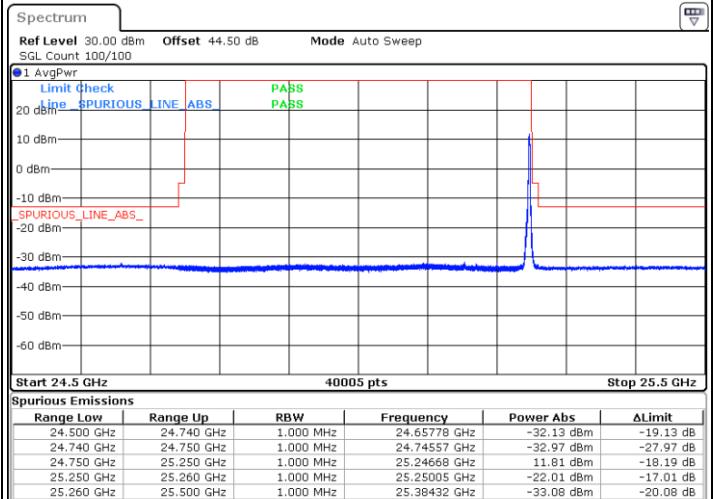
NR Band n258b/ 100MHz / QPSK

Lowest Band Edge / 1 RB



Date: 31.JUL.2020 06:17:11

Highest Band Edge / 1 RB



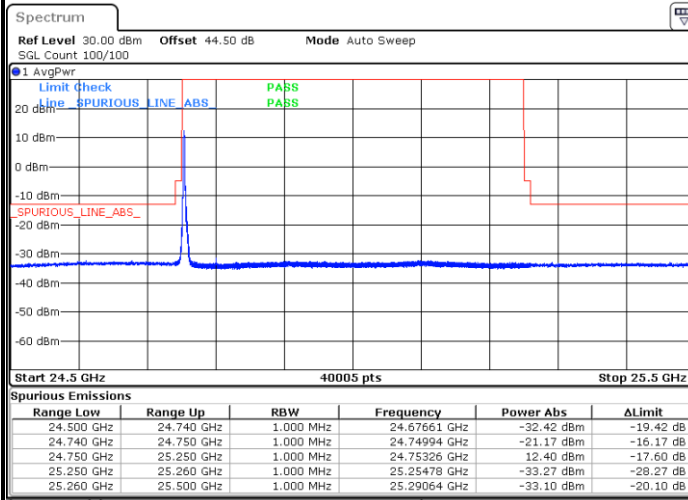
Date: 31.JUL.2020 20:35:36



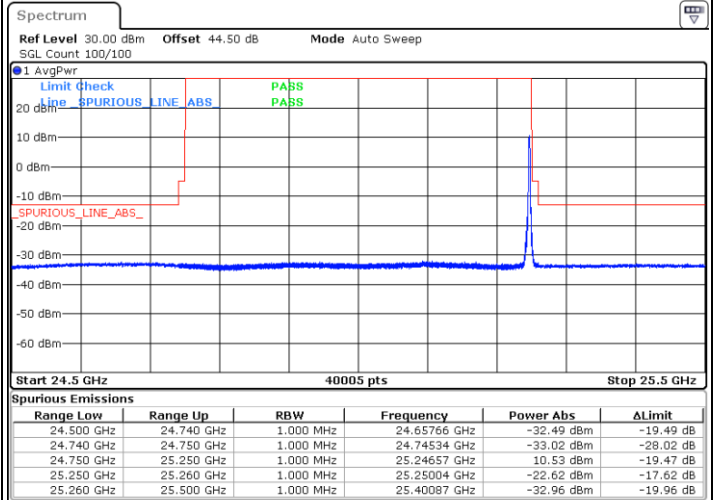
DFT-s-OFDM Module 0

NR Band n258b/ 100MHz / 16QAM

Lowest Band Edge / 1 RB

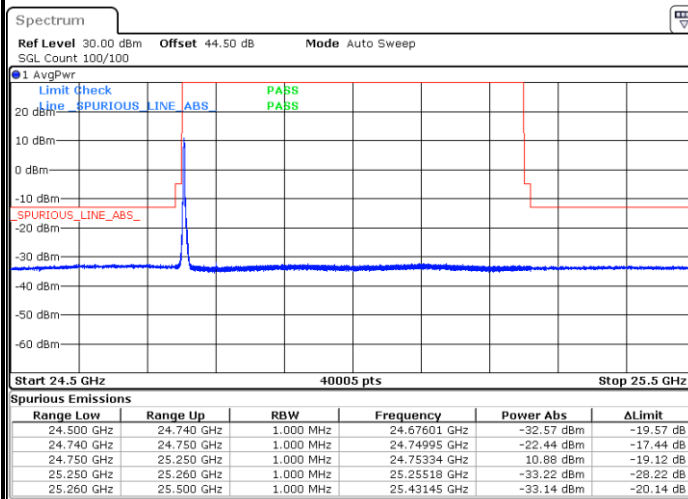


Highest Band Edge / 1 RB

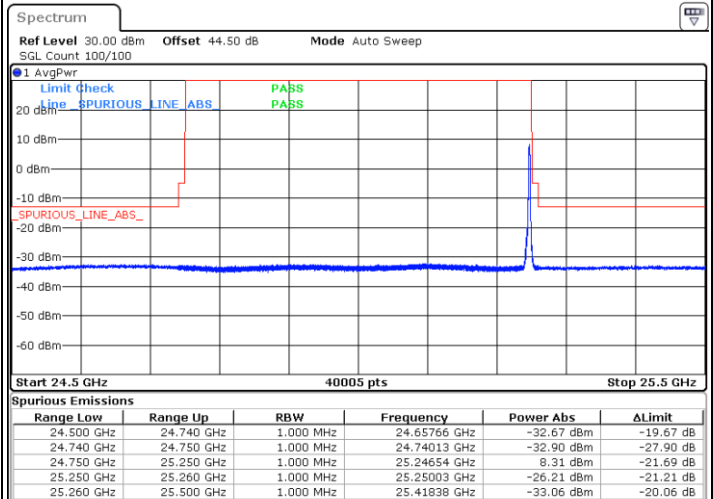


NR Band n258b/ 100MHz / 64QAM

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB

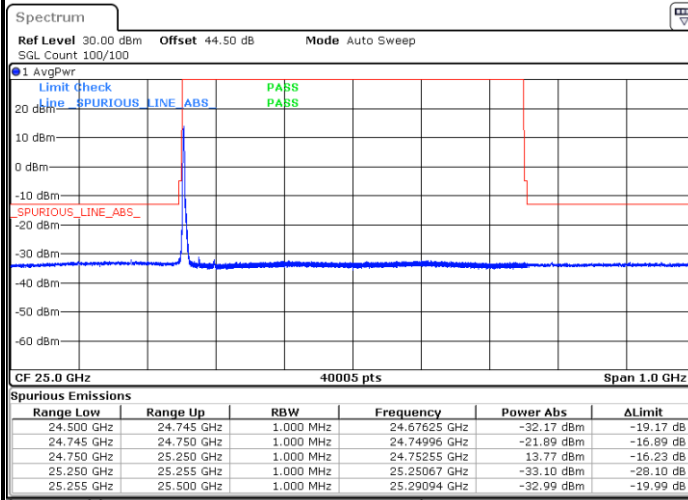




CP-OFDM Module 0

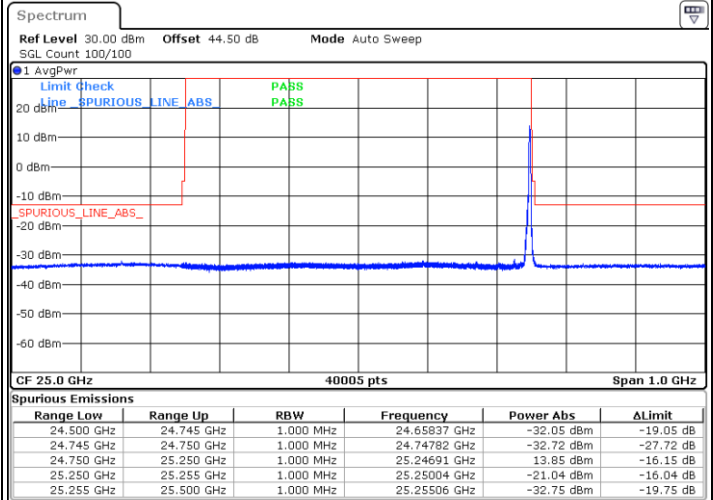
NR Band n258b/ 50MHz / QPSK

Lowest Band Edge / 1 RB



Date: 31.JUL.2020 04:54:12

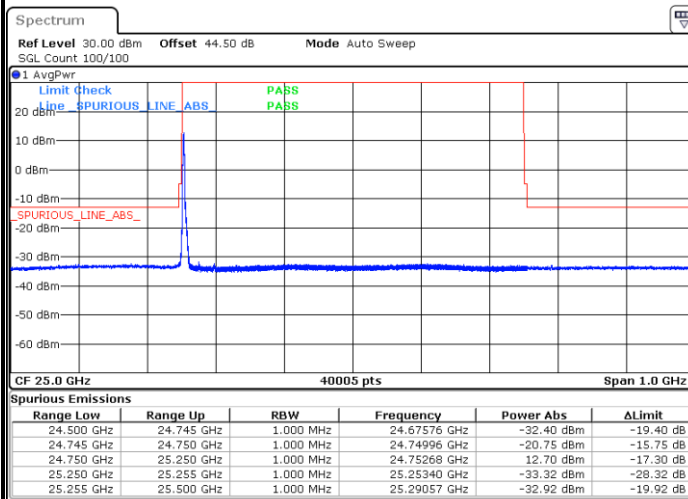
Highest Band Edge / 1 RB



Date: 31.JUL.2020 16:15:28

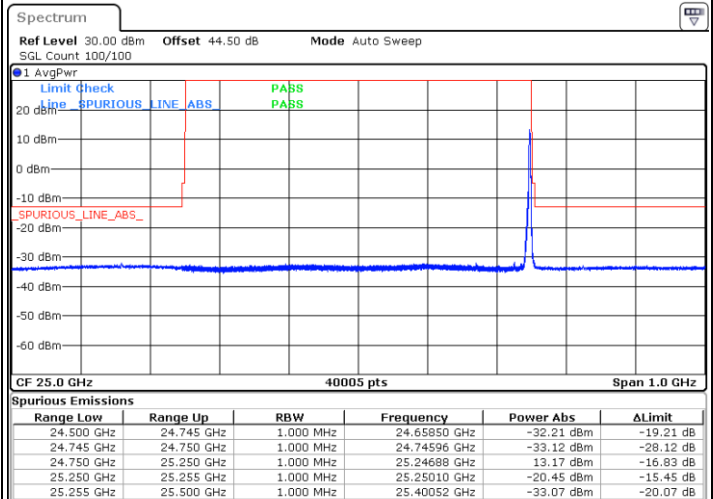
NR Band n258b/ 50MHz / 16QAM

Lowest Band Edge / 1 RB



Date: 31.JUL.2020 04:57:55

Highest Band Edge / 1 RB



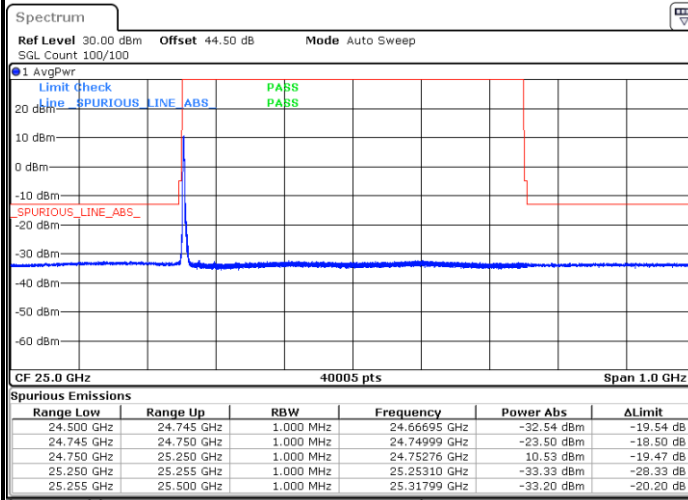
Date: 31.JUL.2020 16:16:12



CP-OFDM Module 0

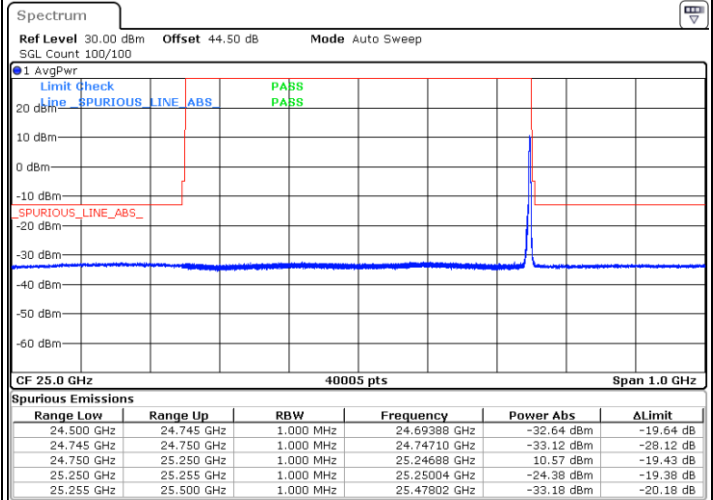
NR Band n258b/ 50MHz / 64QAM

Lowest Band Edge / 1 RB



Date: 31.JUL.2020 05:02:12

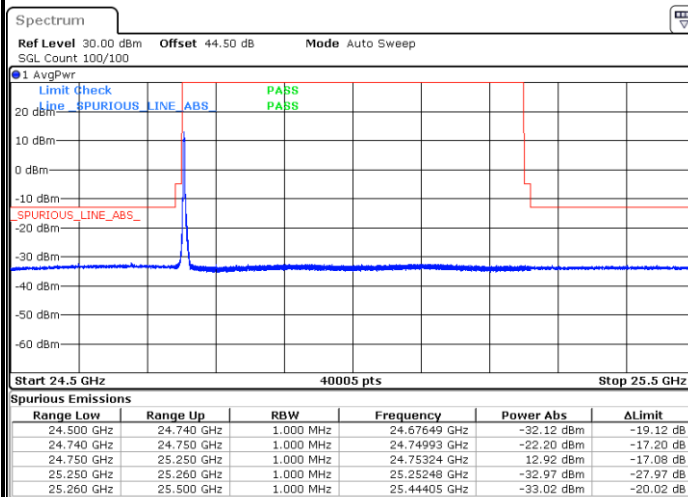
Highest Band Edge / 1 RB



Date: 31.JUL.2020 16:17:11

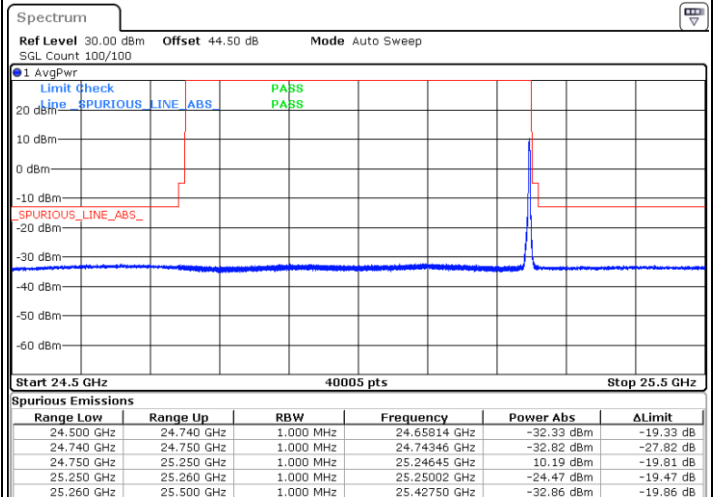
NR Band n258b/ 100MHz / QPSK

Lowest Band Edge / 1 RB



Date: 31.JUL.2020 06:57:04

Highest Band Edge / 1 RB



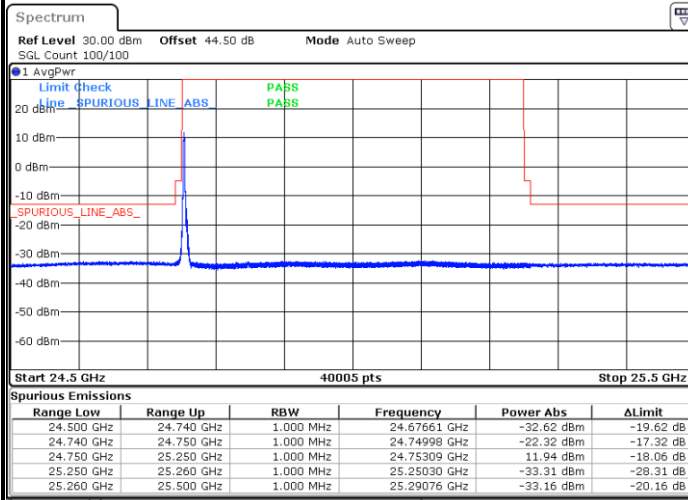
Date: 31.JUL.2020 20:36:12



CP-OFDM Module 0

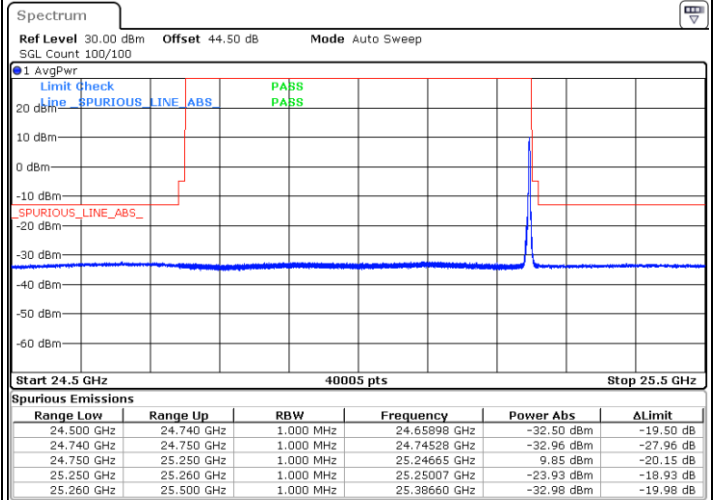
NR Band n258b/ 100MHz / 16QAM

Lowest Band Edge / 1 RB



Date: 31.JUL.2020 06:56:00

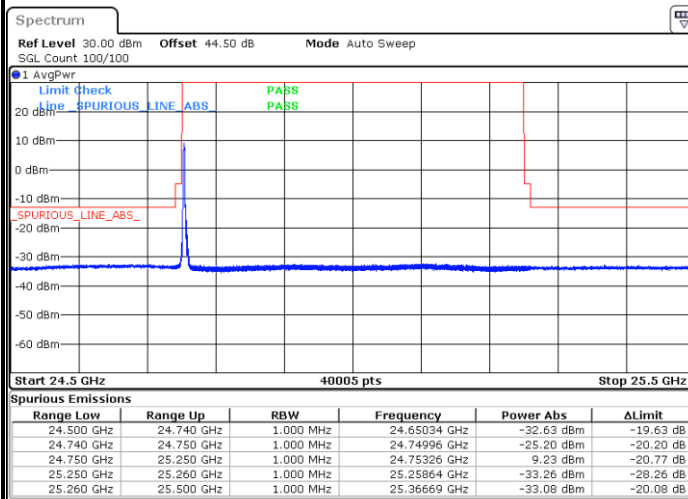
Highest Band Edge / 1 RB



Date: 31.JUL.2020 20:43:48

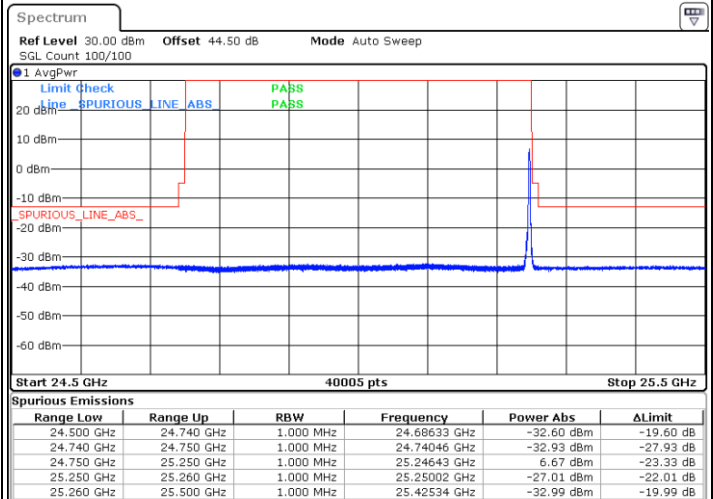
NR Band n258b/ 100MHz / 64QAM

Lowest Band Edge / 1 RB



Date: 31.JUL.2020 07:01:12

Highest Band Edge / 1 RB



Date: 31.JUL.2020 20:44:22